Thank you, Chairwoman Fletcher and Chairwoman Sherrill, for holding this hearing, and thank you to the witnesses for being here today.

The EPA’s IRIS Program was established to identify and characterize the health hazards of chemicals found in the environment. The program conducts chemical hazard identification and dose response assessments, which serve as a source of toxicity information for EPA program and regional offices as well as state and local agencies. As a physician, I understand the importance of chemical toxicity assessments and their role in protecting the environment and advancing public health – particularly for sensitive populations such as children, pregnant women, and the elderly.

Accordingly, it should be our top priority to ensure the underlying science that goes into these assessments is of the highest quality. Unfortunately, the IRIS program has a poor track record in this department, and despite some recent progress by EPA leadership, many issues remain.

Two of the most troublesome problems for the IRIS Program are its inability to produce final products in a timely manner and an unexplained lack of scientific transparency in the assessment process. Both the National Academy of Sciences (NAS) and the Government Accountability Office (GAO) have recently published reports that criticize the program and make recommendations for improvement.

The National Academy of Sciences has published three reports detailing similar problems while also making suggestions for reform and improvement of the program. The NAS reports in 2011 and 2014 found serious problems with IRIS and proposed sweeping recommendations to overhaul the program.

If those recommendations had been fully implemented within the last eight years, the program would be operating in a more functional manner and able to produce chemical assessments in a way that is timely, transparent to the public, and reflective of the best current scientific methodologies. Instead, we continue to live report to report, looking at incremental progress and an overall lack of tangible results.
The 2018 NAS review commends IRIS for its progress to implement systematic review of chemical assessments. And while I agree that IRIS' progress is commendable, several other critical products and recommendations remain unaddressed and incomplete. Publication of a robust handbook that details internal processes, incorporation of mode of action information, and utilization of a weight of evidence framework are a few examples of simple objectives that have not been accomplished despite repeated recommendations to do so. I hardly find this 2018 NAS review consequential in its praise of the program. In fact, I think it is a clear indication that a lot of work remains.

Likewise, the GAO has issued ongoing criticism of the program. In 2009, GAO added the IRIS Program to its High-Risk List, which identifies federal programs with heightened vulnerabilities to fraud, waste, abuse, and mismanagement. Even with clear deficiencies pointed out and the EPA seemingly taking steps towards a few of the recommendations for improvement, the program continues to appear on the high-risk list to this day.

Separate of the High-Risk List, GAO recently issued a report that was largely critical of current EPA leadership and its efforts to manage and update the IRIS program. Democrats and environmental groups point to this report as evidence that the Trump Administration is trying to stifle science. On the contrary, I think these efforts are critical to overhauling a flawed program so that it is responsive to program and regional office needs and best serves EPA’s core mission. The program has many issues that need to be addressed, and EPA leadership is taking necessary steps to do just that.

One of the most troubling issues with IRIS is the publication of misleading or questionable information that can create confusion for Americans regarding the health risks associated with a given chemical.

The 2016 IRIS assessment for ethylene oxide is a prime example. Naturally produced by the human body and plants, ethylene oxide is produced commercially to sterilize medical equipment. OSHA set a safety standard of one part per million for workers exposed eight hours a day, five days a week. This seems to be a reasonable value given that high, long-term exposure may increase cancer risks.

EPA's IRIS program, however, set a low risk value at 100 parts per quadrillion. That value is 19,000 times lower than the naturally occurring level of ethylene oxide in the human body. Essentially, this assessment correlates to a normal human metabolism and breathing ambient air is enough to cause cancer.

It is clear that much work remains before IRIS assessments can be tabbed as the gold standard review that the program was established to be. Meeting objective and transparent standards for evaluating chemical risks will require substantial changes and improvements to the program.

I’m hopeful that one day soon the IRIS program will be able to produce high quality, scientifically sound chemical assessments that are widely accepted by the scientific community, and I look forward to working with my colleagues to ensure this happens.