United States Senate
WASHINGTON, DC 20510

May 31, 2019

The Honorable Michael R. Pompeo
Secretary of State
United States Department of State
2201 C Street, NW
Washington, DC 20520

Dear Secretary Pompeo,

We write regarding recent reports that China may be violating the terms of a multilateral environmental agreement intended to protect the ozone layer from further degradation.

The Montreal Protocol, which entered into force on August 26, 1987, is an international treaty designed to protect the ozone layer by phasing out the production of ozone-depleting compounds, known as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). As a result of this treaty, we have seen a 97 percent reduction in the global consumption of controlled ozone depleting substances.

The success of the Montreal Protocol can be attributed in part to the scientific data being collected and used to inform the very adaptive agreement. From day one, the international monitoring of atmospheric concentrations of ozone-depleting substances led by the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA) have provided critical scientific data that allows policymakers real-time data that track, evaluate, and measure progress of the Montreal Protocol. This data are important for ensuring the policies under the Montreal Protocol are working effectively and for ensuring that participating parties are meeting their obligations.

Just last week, the value of the Montreal Protocol's required international tracking of CFC and HCFC emissions was demonstrated. A new scientific study, published on May 22, 2019 in the journal *Nature*, has produced evidence suggesting China may be the source of emissions of compounds that deplete the ozone layer in violation of its commitment under the Montreal Protocol.[1] This new information builds upon a 2018 study led by NOAA's Global Monitoring Division that found atmospheric concentrations of a Montreal Protocol substance, CFC-11, is not decreasing as expected.[2] The 2018 data suggested the increased emissions are coming from Asia

[1] M. Rigby et al. "Increase in CFC-11 emissions from eastern China based on atmospheric observations," Nature 569, 546-550 (2019). Available at: https://www.nature.com/articles/s41586-019-1193-4
[2] S. A. Montzka et al. "An unexpected and persistent increase in global emissions of ozone-depleting CFC-11," Nature 557, 413-417 (2018). Available at: https://www.nature.com/articles/s41586-018-0106-2 (Hereafter known as "Nature 557, 413-417 (2018))".

and "the increased CFC-11 emissions were from new production not reported to UNEP's Ozone Secretariat, which is inconsistent with the agreed phase-out of CFC production in the Montreal Protocol by 2010."[3] The 2018 report triggered other actions within the Montreal Protocol, which eventually led to the scientific study published this month that helped zero in on the violating source.

The 2019 researchers found that CFC-11 emissions from eastern China were 7,000 tons per year higher between the years 2014-2017 than they were between the years 2008-2012. The researchers also identified the eastern Chinese provinces of Shandong and Hebei as the likely source for global emissions increases. The 2019 report echoes the 2018 report, concluding that "the increase in CFC-11 emissions from eastern mainland China is likely to be the result of new production and use, which is inconsistent with the Montreal Protocol agreement to phase out global chlorofluorocarbon production by 2010."[4] These reports raise critical questions about China's potential violation of the international agreements meant to protect the ozone layer.

Any production and use of CFC-11 is a violation of the Montreal Protocol, and the most recent report underscores the need for continued investments in international emissions monitoring and enforcement of international environmental agreements. China's intensifying environmental challenges have global consequences and cannot be allowed to continue unchecked. These ozone-depleting chemicals were banned because they present an unacceptable global threat to our environment. Once emitted, CFCs make their way into the stratosphere and break down ozone molecules. Ozone in the upper atmosphere is responsible for protecting life on earth from harmful high-energy ultraviolet radiation, which can lead to cancer. Further, CFCs are powerful greenhouse gases, which add to human-caused climate change. Every molecule of CFC-11, the chemical in question today, traps 4,660 times as much heat as carbon dioxide.[5]

In light of these recent and troubling reports, we request that you respond to the following questions:

- Has the State Department reviewed the Rigby et al. May 2019 *Nature* report? If so, does the Department agree that many of these new emissions of ozone-depleting compounds are coming from China? If not, why not?
- Does Embassy Beijing monitor the release of CFC-11 in China?
- Will you commit to working with the international community to pursue tools provided by the Montreal Protocol to ensure China and other countries stay in compliance with the treaty? If so, can you explain further the actions the State Department intends on taking? If not, please explain why.

If you have any questions about these requests, please contact Michele Bustamante in the office of Senator Edward J. Markey via phone at 202-224-2742 or via email at michele_bustamante@markey.senate.gov. Thank you for your assistance.

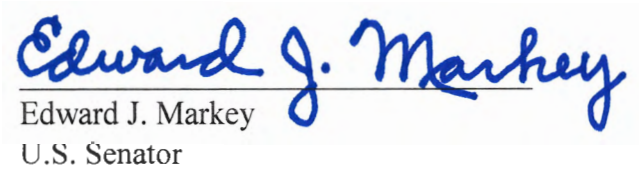
---

[3] Nature 557, 413-417 (2018)

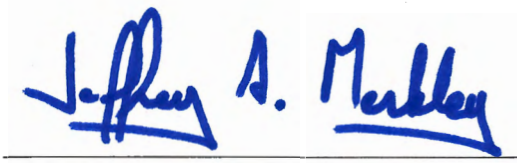
[4] M. Rigby et al. "Increase in CFC-11 emissions from eastern China based on atmospheric observations," Nature 569, 546-550 (2019). Available at: https://www.nature.com/articles/s41586-019-1193-4

[5] Intergovernmental Panel on Climate Change (IPCC). Chapter 8: Anthropogenic and Natural Radiative Forcing, Table 8.7, p 714 in: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.* Available at: https://ar5-syr.ipcc.ch/resources/htmlpdf/WG1AR5_Chapter08_FINAL/

Sincerely,



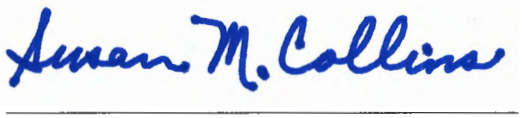
Edward J. Markey
U.S. Senator



Jeffrey A. Merkley
U.S. Senator

Thomas R. Carper
U.S. Senator

Richard J. Durbin
U.S. Senator



Susan M. Collins
U.S. Senator