Statement by Kevin Conole, U.S. Representative to the 64th Session of the UN Committee on the Peaceful Uses of Outer Space on Agenda Item 9, "Spin-off Benefits of Space Technology"
August 31, 2021

Thank you, Mr. Chairman. The United States continues to "bring NASA technology down to Earth." Developed during NASA mission work, these innovations are made available to entrepreneurs, companies, academia, and other government agencies through the NASA Technology Transfer program. Each year, NASA technologies find new life through secondary uses that generate economic growth, create new jobs, and even save lives.

When NASA technology gets turned into commercial products or services, we call them "spinoffs."

For more than 40 years, NASA has tracked examples of successful commercialization in its annual *Spinoff* publication. We have documented more than two thousand space technologies that are improving life on Earth. The United States is pleased to highlight a few spinoff technologies with the Committee, which range from a ventilator made specifically for COVID-19 patients to satellite data and tools helping the places hit hardest by climate change.

Soon after the first COVID-19 cases were detected in the United States, NASA and the Jet Propulsion Laboratory ramped up efforts to help those fighting the virus in hospitals. Developed in just 37 days, the VITAL ventilator was made using fewer parts than traditional ventilators. This ensured it could be built quickly, even in the face of disruptions to supply chains. The demand for VITAL was immediate. More than 100 manufacturers from around the world applied for the free license to build VITAL, with 31 licenses awarded, making it the most licensed NASA technology in history.

And despite the pandemic, we have not stop exploring the solar system and beyond. Earlier this year, the Perseverance rover made a successful landing on Mars with technology that is already paying off here on Earth. One such spinoff is an ultraviolet laser that looks for invisible organic materials in its search for signs of past life on Mars. On Earth, the technology has been adapted into the first small, affordable deep-UV lasers. Today, the lasers are used in handheld devices to monitor personal exposure to contaminants. Similar devices are also used in the pharmaceutical industry to ensure quality control by measuring ingredients with extreme accuracy. The

technology is even being used in wastewater treatment plants to help tailor treatments specifically to local wastewater composition, offering considerable cost savings.

Our investment in space exploration also helps our planet stay green. The commercial sector, academia, and other organizations are actively using NASA's Earth-observation images, data, and analysis for sustainable projects. Many of these efforts track illegal mining, deforestation, and groundwater resources, informing the decisions of small farmers and governments in regions that are feeling the worst effects of climate change.

These are just a few examples of the ways we ensure innovations developed for space exploration are benefitting the nation by creating jobs, protecting the planet, and improving lives globally.

Additional information about these and other spinoffs can be found in the NASA publication, *Spinoff* 2021, which can be found online (at https://spinoff.nasa.gov/).

Thank you, Mr. Chairman.