Statement by Mr. Kevin Conole, United States Agenda Item 6, "Space Debris" January 30, 2024

Thank you, Chair. The year 2023 brought 212 launches across the globe, deploying more than 2,600 spacecraft to space, from low-Earth orbit to geosynchronous Earth orbit. These spacecraft will contribute to the exploration and use of the near Earth space environment for social, economic, and scientific benefit. However, the ongoing increase in launches and spacecraft deployment also underline the urgency and importance of addressing risks from orbital debris to preserve the near-Earth space environment for the long-term safety, stability, and sustainability of future space missions.

Orbital debris mitigation--which aims to limit the generation of new, longlived debris by controlling debris released during normal operations; minimizing debris generated by accidental explosions; selecting safe flight profiles and operational configurations to minimize accidental collisions; and post-mission disposal of space structures--is the most critical step in managing the long-term orbital debris problem. Orbital debris mitigation guidelines and best practices based on these principles have been developed by the Inter-Agency Space Debris Coordination Committee (IADC) and this Subcommittee, which established the UN Space Debris Mitigation Guidelines in 2007. As always, the United States emphasizes the importance of orbital debris mitigation and calls on all spacefaring nations, emerging space nations, international organizations, and nongovernmental organizations to implement both these guidelines and the 21 *Guidelines for the Long-Term Sustainability of Outer Space Activities* to curtail the orbital debris population growth for the safe operations of future space missions.

Chair, the IADC is recognized as the technical authority on orbital debris by the international community. The IADC continues to assess ways to improve the IADC Space Debris Mitigation Guidelines and to evaluate the effects from operations such as large constellations. We acknowledge the importance and the continuing work of the IADC. As a founding member of the IADC, NASA, on behalf of the United States, has actively participated in all major IADC activities in the past, and we are committed to continuing our contributions to the IADC in the future to preserve the space environment and thereby enable the continued benefits of space for the global community. The United States, through its Department of Defense, has provided the U.S. space catalog which contains both active satellites and trackable debris, as well as collision warning information, which has been made public to all space users at no cost for more than a decade. The Department of Commerce seeks to enhance United States space object cataloging and data sharing efforts as it prepares to assume the civil space traffic coordination functions from the Department of Defense in the future. These efforts to provide both continuous service along with data sharing improvements underscore the U.S. commitment to assisting affected spacecraft operators to avoid collisions with existing debris and also avoid the creation of more debris through inadvertent collisions.

Moreover, the United States has led measurement, modeling, protection, and mitigation initiatives on orbital debris for more than 40 years. We continue our measurement efforts to monitor the ever-changing orbital debris environment and to improve object tracking and conjunction assessment capabilities. The collected data is used for developing and updating modeling tools for mission support, and these tools are shared with the global community. For example, the NASA Orbital Debris Engineering Model and Debris Assessment Software are used for risk assessments, mission support, and mitigation compliance evaluation by hundreds of operators, governments, industry, academia, and research groups around the world.

Chair, to support responsible space traffic coordination, NASA released a substantial update to its Spacecraft Conjunction Assessment and Collision Avoidance Best Practices Handbook. To promote orbital debris research activities and foster international collaboration, NASA hosted the Second International Orbital Debris Conference in December 2023, which attracted about 250 participants from many countries, including representatives from the space agencies of Italy, France, Germany, India, Japan, Korea, the United Kingdom, New Zealand, and the European Space Agency. More than 120 technical papers covering orbital debris measurements, modeling, hypervelocity impact protection, reentry, conjunction assessments, space situational awareness, mitigation, remediation, space traffic coordination, and policy were presented during the conference. Our mitigation efforts highlight the U.S. contributions to better understand and manage risks from orbital debris and our commitment to work with the international community to address the global orbital debris