

[Email Comment from Moriba Jah Universal on CRSRA Disposal RFI, received March 8, 2024]

1. **Clear Regulatory Framework:** NOAA plays a pivotal role in shaping the regulatory landscape for space activities, particularly concerning disposal and orbital debris mitigation. To foster a Circular Space Economy, NOAA should consider issuing clear regulations or guidance specific to remote sensing systems. This could involve either a broad approach covering all systems or a targeted strategy for those without FCC licenses. Such clarity would promote sustainable practices and encourage industry participation in circularity initiatives.
2. **Alignment with Circular Economy Principles:** In developing regulations or guidance, NOAA should prioritize alignment with circular economy principles, emphasizing resource efficiency, waste reduction, and lifecycle management. This may involve incorporating industry standards and best practices that support sustainable satellite design, operation, and end-of-life disposal. By promoting circularity, NOAA can enhance the economic and environmental sustainability of space activities.
3. **Comprehensive Definition of Termination Events:** NOAA should ensure that its definition of "termination of operations" encompasses all relevant scenarios, including those unique to remote sensing systems. By capturing a comprehensive range of termination events, NOAA can effectively regulate satellite disposal and mitigate orbital debris, thereby advancing the goals of a Circular Space Economy.
4. **Encouragement of Innovative Disposal Methods:** NOAA should encourage the adoption of innovative disposal methods that promote circularity, such as in-orbit servicing, refueling, and recycling. By endorsing sustainable technologies and practices, NOAA can drive industry innovation towards more resource-efficient and environmentally friendly approaches to satellite disposal.
5. **Documentation Requirements for Circular Practices:** NOAA should establish clear documentation requirements for satellite operators, focusing on the demonstration of circular practices throughout the satellite lifecycle. This documentation should detail strategies for sustainable design, materials selection, and end-of-life management, providing transparency and accountability in adherence to circular economy principles.
6. **Recognition of Unique Challenges:** NOAA should recognize the unique challenges and opportunities associated with remote sensing systems within the context of circularity. This may include considerations such as the importance of preserving data continuity, minimizing mission disruption, and

maximizing resource recovery during satellite decommissioning. By addressing these unique factors, NOAA can tailor its regulatory approach to effectively promote circularity within the remote sensing industry.

7. **Verification Mechanisms for Circular Practices**: NOAA should develop robust verification mechanisms to ensure compliance with circular economy principles throughout the satellite lifecycle. This may involve satellite tracking, telemetry data analysis, and audits to verify adherence to approved disposal plans and circular practices. By enforcing compliance, NOAA can uphold the integrity of circularity initiatives and drive continuous improvement within the space industry.