ANNEX NUMBER 3 BETWEEN

THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND UNITED STATES DEPARTMENT OF THE INTERIOR UNDER INTERAGENCY UMBRELLA AGREEMENT NO. 34745, DATED DECEMBER 6, 2021

ARTICLE 1. PURPOSE

This Annex shall be for the purpose of enabling the National Aeronautics and Space Administration (NASA) and the Department of the Interior's (DOI) United States Geological Survey (USGS) to coordinate their collaboration in support of the Australian Space Agency (ASA) -led Satellite Cross-calibration Radiometer (SCR) project. The SCR project will complement the Sustainable Land Imaging (SLI) program and primary SLI Landsat missions, serve as a calibration frame of reference for observing Earth from space, transferring the radiometric fidelity from Landsat to smaller-scale, less well-calibrated space-based Earth observing systems (e.g., commercial small satellites), and make data from these missions more useful for science and applications.

The SCR mission will collect hyperspectral observations coincident with primary SLI missions like Landsat and then provide these highly accurate and stable cross-calibration data to targeted cooperative missions with lower radiometric accuracy and stability. This will result in improved and more interoperable small satellite observations with greater benefit to scientific research and applications, including augmentation of the science and research applications derived from SLI data.

The SCR mission responsibilities are described via three separate agreements that document the relevant SCR roles and responsibilities between the respective parties: The first is between NASA and ASA, the second is between the USGS and Geoscience Australia (GA), and the third—this Annex— is between NASA and the USGS. Through the international agreements, NASA and the USGS will coordinate their assistance to Australia for an SCR demonstration mission (SCR 1) in support of SLI missions, including space and ground segment development, satellite operations, and product development and dissemination.

Under this SLI interagency annex, the NASA Science Mission Directorate (SMD) Earth Science Division (ESD) is responsible for coordinating NASA contributions to the SCR project and the USGS National Land Imaging Program is responsible for coordinating the USGS contributions, as detailed in ARTICLE 2 below.

ARTICLE 2. <u>RESPONSIBILITIES</u>

A. NASA will use reasonable efforts to:

- 1. Assign a lead to coordinate with the DOI/USGS on joint U.S. activities and contributions to the Australian SCR project;
- 2. Support the DOI/USGS with advice, guidance, and concurrence on export control issues associated with providing both intellectual and material contributions to the Australian government for the SCR project;
- 3. Support cross-calibration of the SCR and NASA Climate Absolute Radiance and Refractivity Observatory Pathfinder (CLARREO-PF) radiometers;
- 4. Coordinate with the DOI/USGS on the development of SCR-related briefings and other materials for interaction with the U.S. Executive and Legislative branches, as well as briefings and other materials for interaction with potential external partners; and,
- 5. Coordinate with the DOI/USGS on public communication of details and benefits of the SCR partnership publicly and within international fora, including the Group on Earth Observations (GEO) and Committee on Earth Observation Satellites (CEOS).
- B. The USGS will use reasonable efforts to:
- 1. Assign a USGS lead to coordinate with NASA on joint U.S. activities and contributions to the Australian SCR project;
- 2. Coordinate with NASA on addressing export issues for both intellectual and material contributions in support of the SCR project;
- 3. Coordinate with NASA on the development of SCR-related briefings and other materials for interaction with the U.S. Executive and Legislative branches, as well as briefings and other materials for interaction with potential external partners; and,
- 4. Coordinate with NASA on public communication of details and benefits of the SCR partnership publicly and within international fora including the Group on Earth Observations (GEO) and Committee on Earth Observation Satellites (CEOS).

ARTICLE 3. FINANCIAL OBLIGATIONS

There will be no transfer of funds between the Parties under this Annex and each Party will fund its own participation. All activities under or pursuant to this Annex are subject to the availability of funds, and no provision of this Annex shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. § 1341).

ARTICLE 4. <u>INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS - IDENTIFIED</u> INTELLECTUAL PROPERTY

A. Under paragraph C of the Intellectual Property Rights - Data Rights - Handling of Data Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving

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Party. The lists below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data.

- 1. Third Party Proprietary Data: The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.
- 2. Controlled Government Data: The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.
- 3. The following software and related Data will be provided to Partner under a separate Software Usage Agreement: None.

ARTICLE 5. TERM OF ANNEX

This Annex becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or ten (10) years from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella IAA. The term of this Annex shall not exceed the term of the Umbrella IAA. The Annex shall automatically expire upon the expiration of the Umbrella IAA.

ARTICLE 6. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Annex by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 7. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Annex.

Technical Points of Contact

NASA
Michael P. Egan, Ph.D.
Program Executive for SLI,
Earth Science Division
Science Mission Directorate
300 E Street SW

Washington, DC 20546 Phone: 202-358-1040 michael.p.egan@nasa.gov U.S. Department of the Interior

Timothy R. Newman Program Coordinator, National Land Imaging U.S. Geological Survey 12201 Sunrise Valley Drive Reston, VA 20192-0002 Phone: 703-648-4405

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ARTICLE 8. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the DOI. Modification of an Annex does not modify the terms of the Umbrella Agreement.

ARTICLE 9. <u>SIGNATORY AUTHORITY</u>

Approved and authorized on behalf of each Party by:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

UNITED STATES DEPARTMENT OF THE INTERIOR

Karen St. Germain, Ph.D. Director, Earth Science Division Science Mission Directorate David Applegate, Ph.D. Director, U.S. Geological Survey