

ANNEX
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER
AND LOCKHEED MARTIN
UNDER SPACE ACT UMBRELLA AGREEMENT
NO. SAA8-2134592, DATED 8/5/2021
SAA8-2134592.14

ARTICLE 1. PURPOSE

This Annex shall be for the purpose of Pre-flight ground testing activities in support of the NASA/DARPA partnership on the Demonstration Rocket for Agile Cislunar Operations (DRACO) Program, which is a Nuclear Thermal Propulsion (NTP) flight demonstrator mission.

This is an annex to the existing NASA-LM Reimbursable Space Act Agreement (RSAA) SAA8-2134592 and is intended to cover Test Series 3 (TS3) activities between NASA Marshall Space Flight Center (MSFC) and the prime DRACO Phase 2/3 contractor Lockheed Martin (LM). TS3 test activities occurring at NASA MSFC test facilities will utilize DRACO contractor-provided Engineering Development Units (EDUs) or flight hardware units for potential performance or environmental testing. Activities this annex is intended to cover includes reactor EDU cold flow testing.

The legal authority for this Annex, consistent with the Umbrella Agreement, is in accordance with the Space Act, Other Transactions Authority (OTA), 51 U.S.C. § 20113(e).

ARTICLE 2. RESPONSIBILITIES

A. NASA MSFC will use reasonable efforts to:

1. Conduct Test Effort Kickoff meeting.
2. Communicate test facility capabilities and limitations.
3. Complete test article/sensor integration and checkouts, conduct a TS3 Test Readiness Review (TRR), execute test series, and support Lockheed Martin as needed for test turn data analysis.
4. Coordinate hardware disposition with Lockheed Martin.

B. LOCKHEED MARTIN will use reasonable efforts to:

1. Participate in the Test Effort Kickoff meeting and provide comments.
2. Communicate test matrix and test article interfaces.
3. Provide a computer-aided design (CAD) model and/or may provide a 3D printed plastic model of the test article for facility buildup activities.
4. Deliver TS3 test article hardware to NASA MSFC East Test Area.

5. Participate in the TRR meeting and provide comments and test turn data analysis.

ARTICLE 3. SCHEDULE AND MILESTONES

The planned major milestones for the activities for this Annex defined in the "Responsibilities" Article are as follows:

1. NASA MSFC to conduct Test Effort Kickoff meeting Effective Date + 1 week
2. Lockheed Martin to communicate test matrix and test article interfaces Milestone 1 + 5 months
3. Lockheed Martin to provide a CAD model and/or may provide a 3D printed plastic model of the test article for facility buildup activities Milestone 2 + 4 weeks
4. Lockheed Martin to deliver TS3 test article hardware to NASA MSFC East Test Area Milestone 3 + 1 day
5. NASA MSFC to complete test article/sensor integration and checkouts, conduct a TS3 TRR, execute test series, and support Lockheed Martin as needed for test turn data analysis Milestone 4 + 2 weeks
6. NASA MSFC to coordinate test article hardware disposition with Lockheed Martin As negotiated

ARTICLE 4. FINANCIAL OBLIGATIONS

A. Partner agrees to reimburse NASA an estimated cost of \$1,100,432 for NASA to carry out its responsibilities under this Annex.

Each payment shall be marked with MSFC and \$1,100,432.

B. NASA will not provide services or incur costs beyond the current funding. Although NASA has made a good faith effort to accurately estimate its costs, it is understood that NASA provides no assurance that the proposed effort under this Annex will be accomplished for the estimated amount. Should the effort cost more than the estimate, Partner will be advised by NASA as soon as possible. Partner shall pay all costs incurred and have the option of canceling the remaining effort, or providing additional funding in order to continue the proposed effort under the revised estimate. Should this Annex be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within one year after completion of all effort under this Annex, and promptly thereafter, at Partner's option return any unspent funds to

Partner or apply any such unspent funds to other activities under the Umbrella Agreement. Return of unspent funds will be processed via Electronic Funds Transfer (EFT) in accordance with 31 C.F.R. Part 208 and, upon request by NASA, Partner agrees to complete the Automated Clearing House (ACH) Vendor/Miscellaneous Payment Enrollment Form (SF 3881).

ARTICLE 5. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

A. Data produced under this Annex which is subject to paragraph C. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement will be protected for the period of one year.

B. Under paragraph H. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving Party. The lists below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data provided.

1. Background Data:

None

2. Third Party Proprietary Data:

None

3. Controlled Government Data:

None

4. The following software and related Data will be provided to Partner under a separate Software Usage Agreement:

None

ARTICLE 6. 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 two years from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

ARTICLE 7. RIGHT TO TERMINATE

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

ARTICLE 8. 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 George C. Marshall Space Flight Center
Tyler Gibson
Aerospace Engineer
Mail Suite: ER13
Marshall Space Flight Center, AL 35812
Phone: 256-544-8396
tyler.gibson@nasa.gov

LOCKHEED MARTIN SPACE
Bobby Going
Cold Flow Test Engineer
12257 South Wadsworth Blvd.
Littleton, CO 80125-8504
Phone: 303-977-2040
bobby.going@lmco.com

ARTICLE 9. MODIFICATIONS

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

ARTICLE 10. SIGNATORY AUTHORITY

The signatories to this Annex covenant and warrant that they have authority to execute this Annex. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE
FLIGHT CENTER

LOCKHEED MARTIN
SPACE

BY: _____
Joe L. Leopard
Associate Director, Technical

BY: _____
Melinda McCord
Subcontract Manager

DATE: _____

DATE: _____