

ANNEX
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER
AND
ONYX AEROSPACE
UNDER
SPACE ACT UMBRELLA AGREEMENT
NO. SAA8-2135668, DATED _____
SAA8-2135668.2

ARTICLE 1. PURPOSE

This Annex shall be for the purpose of completing a detailed design for a development Bi-propellant Throttling Cavitating Venturi Valve.

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

NASA will use reasonable efforts to:

1. Provide recommendations on the performance, design and construction requirements to be used.
2. Conduct initial valve and actuator sizing and conceptual design during Preliminary Design Review (PDR).
3. Conduct detailed valve and actuator design. Provide valve structural analysis and flow analyses during Critical Design Review (CDR).
4. Provide drawing package suitable for valve manufacturing and recommendation on actuator procurement.

Onyx will use reasonable efforts to:

1. Conduct kickoff meeting to establish design and construction goals.
2. Supply detailed valve performance, design and construction requirements.
3. Review provided materials and provide comments during PDR.
4. Review provided materials and provide comments during CDR.

ARTICLE 3. SCHEDULE AND MILESTONES

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

1. Onyx Aerospace to conduct kickoff meeting to establish Effective Date + 1 week

design and construction goals

2. Onyx Aerospace to supply detailed valve performance, design and construction requirements Milestone 1 + 2 weeks
3. NASA MSFC to conduct initial valve and actuator sizing and conceptual design Milestone 2 + 16 weeks
4. NASA MSFC to conduct detailed valve and actuator design. Provide valve structural analysis and flow analyses Milestone 3 + 16 weeks
5. NASA MSFC to provide drawing package suitable for valve manufacturing and recommendation on actuator procurement Milestone 4 + 1 week

ARTICLE 4. FINANCIAL OBLIGATIONS

A. Partner agrees to reimburse NASA an estimated cost of \$367,517 for NASA to carry out its responsibilities under this Annex. The Partner is to pay two payments. The first payment of \$220,376 up front and the second payment of \$147,141 to be paid after the completion of milestone 3 (Preliminary Design Review). Each payment shall be marked with SAA8-2135668.2.

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 one year 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

David Eddleman

Branch Chief

Mail Suite: ER14

Marshall Space Flight Center, AL 35812

Phone: 256-427-3676

david.e.eddleman@nasa.gov

Onyx Aerospace

Stephen Hanna

President

3414 Governors Drive SW

Suite 210

Huntsville, Al 35805-3655

Phone: 256-444-2510

stephen.hanna@onyxaero.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

ONYX AEROSPACE

BY: _____
Mary E. Koelbl
Director Engineering Directorate

BY: _____
Stephen Hanna
President, Onyx Aerospace

DATE: _____

DATE: 18 OCT 2022