

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE 1 OF 11 PAGES		
2. AMENDMENT/MODIFICATION NUMBER 0001			3. EFFECTIVE DATE 01/29/2025		4. REQUISITION/PURCHASE REQUISITION NUMBER		5. PROJECT NUMBER (If applicable)	
6. ISSUED BY NASA/John F. Kennedy Space Center Procurement Office, Mail Code: OP-OS Kennedy Space Center, Florida 32899			7. ADMINISTERED BY (If other than Item 6)		CODE			
8. NAME AND ADDRESS OF CONTRACTOR (Number, street, county, State and ZIP Code)					(X)			9A. AMENDMENT OF SOLICITATION NUMBER
					(X)			80KSC024R0010
					(X)			9B. DATED (SEE ITEM 11) 12/20/2024
					(X)			10A. MODIFICATION OF CONTRACT/ORDER NUMBER
CODE					FACILITY CODE			10B. DATED (SEE ITEM 13)
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS								
☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☒ is extended. ☐ is not extended.								
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.								
12. ACCOUNTING AND APPROPRIATION DATA (If required)								
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.								
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.							
☐								
☐	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).							
☐	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:							
☐	D. OTHER (Specify type of modification and authority)							
E. IMPORTANT: Contractor ☐ is not ☐ is required to sign this document and return _____ copies to the issuing office.								
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)								
See Continuation Sheet								

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR		16B. UNITED STATES OF AMERICA	
15C. DATE SIGNED		16C. DATE SIGNED	
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

Previous edition unusable

The purpose of this amendment is to make the following revisions (reference the change bars on the attached replacement pages).

1. Extend the RFP proposal due date from February 3, 2025, to February 12, 2025.
2. Update Attachment 1 Statement of Work (SOW) CCSFS CLIN 8, Section (E) (1) from one paragraph to individual numbered sentences.
3. Replace Attachment 1 SOW GRC-LF CLIN 9 and SOW GRC-ATF CLIN 10 in its entirety.
4. Update Attachment 1 SOW MSFC CLIN 17 and 18 Section (E) (2).
5. Update Attachment 2 Capability Form with ‘Daily’ in blocks 12A, B and C.
6. Update Attachment 2.1 Capability Form with ‘Daily’ in blocks 12A, B and C.

SECTION 6 PROPOSAL INSTRUCTIONS

6.1 CONTINUATION OF SF 1449 BLOCK 7

- (a) Questions regarding this solicitation must be submitted electronically, with the solicitation number in the subject line, and be directed to the Contracting Officer Victoria Hargrave, at ksc-helium-info@mail.nasa.gov
- (b) The Offeror shall submit all questions, if any, no later than January 9, 2024, at 4:30 p.m. Eastern Time to allow for analysis and dissemination of responses in advance of the proposal due date. The Government will not guarantee a response to late questions.
- (c) Questions shall not be directed to the technical activity personnel.
- (d) The Government will not answer oral questions due to the possibility of misunderstanding or misinterpretation.

(End of provision)

6.2 CONTINUATION OF SF 1449 BLOCK 8

- (a) Proposals are due no later than February 12, 2025 at 4:30 p.m. Eastern Time.
- (b) Proposals received after the due date and time specified in paragraph (a) will be processed in accordance with FAR 52.212-1, Instructions to Offerors-Commercial Products and Commercial Services, paragraph (f).

(End of provision)

6.3 ADDENDUM TO FAR 52.212-1 OFFERORS-COMMERCIAL PRODUCTS AND COMMERCIAL SERVICES (SEP 2023): TAILORED PARAGRAPHS

Substitute the following paragraphs (b), (c), (e), (g), and (h) for paragraphs (b), (c), (e), (g), and (h) of the basic provision:

- (b) Submission of offers. Offer means a response to a solicitation that, if accepted, would bind the Offeror to perform the resultant contract. Responses to requests for proposals are offers called “proposals.” Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449 or letterhead stationery.
 - (1) The Offeror shall submit its proposal via NASA’s Enterprise File Sharing and Sync Box (EFSS Box), a FedRAMP Moderate certified platform. Electronic submissions shall not contain hidden formulas, tables, be locked, be protected, or contain links to data not included in the electronic copy. All electronic submissions should be searchable and

**STATEMENT OF WORK
CAPE CANAVERAL SPACE FORCE STATION (CCSFS) (SLC-41 VULCAN
SUPPORT) CLIN 8**

(A) Delivery Address:

United Launch Alliance
Space Launch Complex 41 (SLC-41) Cape Canaveral Space Force Station

(B) Delivery Hours:

- (1) Routine delivery hours: 6:00 a.m. - 2:30 p.m. (local time) Monday through Friday.
- (2) Emergency delivery hours: 24 hours per day, 7 days per week.

(C) Routine Requirements: The Government anticipates ordering approximately 40,000 liters per month. For a Vulcan campaign, a single tanker delivery (40,000 liters) is required in advance of Wet Dress Rehearsal (WDR), approximately one month before launch, with a second tanker required shortly before launch.

(D) Peak Requirements: The Government anticipates ordering the Monthly maximum one (1) time per year in the instance of a second launch series required for a mission. Maximum daily, weekly, and monthly delivery requirements are defined in Section 2.1.1 Schedule of Supplies.

(E) Special Delivery Equipment Requirements: Tankers shall require the following capabilities:

- (1) 4 flex hose connections to effect LHe product withdrawal:
 - (i) 2" x 4" VJ liquid withdrawal (w/ manual iso valve, $C_v \geq 23.5$).
 - (ii) 2" x 4" VJ tanker ullage press/vent.
 - (iii) Liquid phase pressure sense line.
 - (iv) Vapor phase pressure sense line.
- (2) MAWP ≥ 151 pounds per square inch (psig).
- (3) MOP ≥ 145 psig.
Note: Operating at MOP may require disabling of GHe vent valve supply to intermediate radiation shield. Current operations anticipate pressurization to 125 psig.
- (4) 2" piping minimum liquid outlet line.
- (5) Manual Outlet Isolation valve with $C_v \geq 23.5$.

(F) Access Requirements: All personnel entering NASA locations must be badged for access in accordance with the Personnel Identity Verification (PIV) requirements. Badging requirements and points of contact shall be listed in the delivery order. Drivers required to be U.S. Citizens. After obtaining access to KSC and check-in at KSC/Propellants North, tankers will be escorted onto CCAFS and SLC-41. A similar process will occur for pickup of empty tanker at SLC-41.

**STATEMENT OF WORK
GLENN RESEARCH CENTER, LEWIS FIELD (GRC-LF) CLIN 9**

GRC-LF Government contractor personnel will typically transport and drop off Government owned trailers at the Contractor's facility for filling and then pick up the filled trailers. In the rare event a vendor trailer delivery to GRC-LF is required, see Section 3:

1. General Information:

(A) Routine Requirements: The Government anticipates ordering 80,000 standard cubic feet (scf) bulk gas per month approximately four (4) times per year.

(B) Peak Requirements:

- (1) The Government anticipates ordering the monthly maximum approximately one (1) time per year.
- (2) The Government's order of the monthly maximum in any given month does not preclude the Government from placing orders for Routine or Peak Requirements in other months. Maximum daily, weekly, and monthly delivery requirements are defined in Section 2.1.1 Schedule of Supplies.

(C) The Contractor shall fill Government owned gaseous helium trailers that are delivered by the Government to the Contractor's fill location, or, if requested, deliver product to GRC-LF in vendor owned trailers (up to 180,000 scf capacity if requested by the Government) to fill on site storage (including Government tube trailers) of gaseous helium at the Government location.

(D) When contractor onsite delivery is required, the contractor will be notified by GRC.

2. GRC Government contractor personnel Transport and Drop-off:

(A) GRC Transport and Drop-off:

- (1) Government contractor personnel shall transport and drop off empty Government owned trailers to the Contractor's facility upon notification and acceptance of the Government's requirement by the Contractor. The Contractor shall be given 48 hours' notice by the Government prior to the Government's delivery of the Government-owned gaseous trailers to the transfill station. The Contractor shall fill trailers within 24 hours of drop off.
- (2) The Contract Terms and Conditions Other Pricing clauses 2.1 through 2.8 are not applicable.

3. Contractor Delivery Requirements:

(A) Delivery Address:

Glenn Research Center
21000 Brookpark Rd

Cleveland, OH 44135

(B) Delivery Hours:

- (1) Routine delivery hours: 8:00a.m. - 4:00 p.m. (local time) Monday through Friday.
- (2) Emergency delivery hours: 24 hours per day, 7 days per week.

(C) Special Delivery Equipment Requirements: N/A.

(D) Access Requirements: All personnel entering NASA locations must be badged for access in accordance with the Personnel Identity Verification (PIV) requirements. Badging requirements and points of contact shall be listed in the delivery order. Drivers required to be U.S. Citizens.

(E) Government-Furnished Property (GFP): N/A.

(F) Contractor deliveries to GRC-LF utilizing Contractor owned trailers are to be within 72 hours of ordering. In emergency situations, the Government may request delivery within less than 72 hours, subject to Emergency Delivery charge if accepted by supplier.

(G) For filling of GHe storage at GRC: Normal pressure of GHe receiver vessel at the time of fill is 300 psig. Maximum allowable pressure of receiver vessel at the end of delivery is 2400-2600 psig.

- (1) The Contract Terms and Conditions Other Pricing clauses 2.1 through 2.8 are applicable.

(End)

STATEMENT OF WORK
GLENN RESEARCH CENTER, NEIL A. ARMSTRONG TEST FACILITY (GRC- ATF)
SANDUSKY, OH CLIN 10

GRC-ATF Government contractor personnel will typically transport and drop off Government owned trailers at the Contractor's facility for filling and then pick up the filled trailers. In the rare event a vendor trailer delivery to GRC-ATF is required, see Section 3:

1. General Information:

- (A) Routine Requirements: The Government anticipates ordering approximately 50,000 standard cubic feet (scf) per month.
- (B) Peak Requirements: The Government anticipates ordering the monthly maximum approximately one (1) time per year. Maximum daily, weekly, and monthly delivery requirements are defined Section 2.1.1 Schedule of Supplies.
- (C) The Contractor shall fill Government owned gaseous helium trailers that are delivered by the Government to the Contractor's fill location, or if requested, deliver product to GRC-ATF in vendor owned trailers (up to 180,000 scf capacity if requested by the Government). Vendor owned trailer deliveries will be utilized directly for testing with the potential to occasionally fill gas receiver vessels or government owned trailers at the Government location.
- (D) When contractor onsite delivery is required, the contractor will be notified by GRC.

2. GRC Government contractor personnel Transport and Drop-off:

- (A) GRC Transport and Drop-off:
 - (1) Government contractor personnel shall transport and drop off empty Government owned trailers to the Contractor's facility upon notification and acceptance of the Government's requirement by the Contractor. The Contractor shall be given 48 hours notice by the Government prior to the Government's delivery of the Government-owned gaseous trailers to the transfill station. The Contractor shall fill trailers within 24 hours of drop off. The maximum pressure of government-owned trailers is 2400-2600 psig.
 - (2) The Contract Terms and Conditions Other Pricing clauses 2.1 through 2.8 are not applicable.

3. Contractor Delivery Requirements:

- (A) Delivery Address:
GRC Armstrong Test Facility
3597 Scheid Rd
Sandusky, OH 44870

(B) Delivery Hours:

- (1) Routine delivery hours: 7:30 a.m. - 3:30 p.m. (local time) Monday through Friday.
- (2) Emergency delivery hours: 24 hours per day, 7 days per week.

(C) Special Delivery Equipment Requirements: N/A.

(D) Access Requirements (i.e., security): All personnel entering NASA locations must be badged for access in accordance with the Personnel Identity Verification (PIV) requirements. Badging requirements and points of contact shall be listed in the delivery order. Drivers required to be U.S. Citizens.

(E) Government-Furnished Property (GFP): N/A.

(F) During test periods, 24/7 delivery support of vendor owned trailers may be required, including weekends. Contractor deliveries to locations utilizing contractor owned trailers shall be made within 48 hours of the Government placing an order.

(G) The standard pressure of vendor owned helium trailers is 2400 psi-3000 psi.

(H) Normal pressure of receiver vessel at the time of fill is 300 psig. Maximum allowable pressure of receiver vessels at the end of delivery will vary based on the individual receiver vessel's maximum allowable working pressures, ranging from 1380 to 5500 psig.

(I) On site compressor (operated by the Government) will be available to fill receiver vessels, including vessels whose maximum allowable working pressures exceed the suppliers maximum standard trailer pressures (approx. 2400-3000 psi).

(J) The Contract Terms and Conditions Other Pricing clauses 2.1 through 2.8 are applicable.

(K) The Government may request the delivery and detention of vendor owned trailers (up to 180,000 scf capacity) at GRC-ATF when Government owned trailer assets are inadequate to support GRC-ATF requirements. This is anticipated during the testing period reflected under Peak Requirement. A minimum of 45 days' notice will be provided to the vendor to coordinate and facilitate the delivery of vendor owned trailers to be detained at GRC-ATF. Detention of up to 3 vendor supplied trailers at a time can be anticipated to take place for the duration of each test period (from 1 to 3 months depending on the test) and may occur up to twice a year.

(End)

**STATEMENT OF WORK
MARSHALL SPACE FLIGHT CENTER (MSFC) CLIN 17 AND 18**

(A) Delivery Address:

Marshall Space Flight Center
Marshall Space Flight Center, AL 35812

(B) Delivery Hours:

- (1) Routine delivery hours:
 - (i) Bulk Gas deliveries: 7:00 a.m. - 12:00 p.m. (noon) Monday through Friday.
 - (ii) Dewar deliveries: 8:00 a.m. - 4:00 p.m. (local time) Monday through Friday.
- (2) Emergency delivery hours: 24 hours per day, 7 days per week.

(C) Routine Requirements:

- (1) Dewar liquid: The Government anticipates ordering 100 liters per month, approximately 4 times a year.
- (2) Bulk gas: The Government anticipates ordering 300,000 standard cubic feet (scf) per month, with weekly deliveries of 150,000 scf approximately twice a month.

(D) Peak Requirements:

- (1) Dewar liquid: The Government anticipates placing an order for the monthly maximum approximately one (1) time per year.
- (2) Bulk gas: The Government anticipates placing an order for the monthly maximum approximately two (2) times a year. Maximum daily, weekly, and monthly delivery requirements are defined in Section 2.1.1 Schedule of Supplies.

(E) Special Delivery Equipment Requirements:

- (1) The contractor shall supply all dewars. Normal dewar size will be 100 liters, with occasional 250-liter dewars required. 100 liter and 250-liter size dewars shall be nonmagnetic dewars.
- (2) Bulk gas deliveries shall require trailer connection adaptable to ½ inch AN (AN-8) fitting. For Bulk Gas, the contractor trailers shall be parked at one of two (2) unloading stations at Building 4676. The contractor trailers will be connected through GFE flex hoses to a GFE helium compression system which will boost the helium pressure and fill into GFE helium storage vessels. The receiver vessel volume is 330,000 scf at the maximum allowable pressure of 4,000 pounds per square inch gauge (psig). Typical receiver vessel pressure at the time of delivery is 1,000 psig. Typical unload time is 4-5 hours, with an estimated maximum unload time of 8 hours.

(F) Access Requirements (i.e., security): All personnel entering NASA locations must be badged for access in accordance with the Personnel Identity Verification (PIV) requirements. Badging requirements and points of contact shall be listed in the delivery order. Drivers required to be U.S. Citizens.

CAPABILITY FORM NASA AGENCY -WIDE SUPPLY OF GASEOUS AND LIQUID HELIUM		1 DATE	2 CONTRACT LINE ITEM NUMBER	3 PAGE 1 OF
4 CONTRACTOR/OFFEROR NAME		5 SOLICITATION NUMBER 80KSC024R0010		6 CONTRACT NUMBER
7 CONTRACTOR/OFFEROR ADDRESS		8 CONTRACTOR/OFFEROR PRIMARY CONTACT (Name, Email, Phone, Fax)		
		9 CONTRACTOR/OFFEROR ALTERNATE CONTACT (Name, Email, Phone, Fax)		
10 PRIMARY PRODUCTION FACILITY		11 PRIMARY TRANSFILL FACILITY		
A ADDRESS		A ADDRESS		
B PROPELLANT HELIUM	C MAXIMUM FIXED STORAGE	B PROPELLANT HELIUM	C MAXIMUM FIXED STORAGE	
	C(1) AVERAGE INVENTORY IN FIXED STORAGE FROM: (06/01/2024 - 11/30/2024 - 6 mo Period)		C(1) AVERAGE INVENTORY IN FIXED STORAGE FROM: (06/01/2024 - 11/30/2024 - 6 mo Period)	
D MAXIMUM DAILY PRODUCTION	D(1) AVERAGE DAILY PRODUCTION FROM: (12/01/2023 - 11/30/2024 - 12 mo period)	D MAXIMUM DAILY PRODUCTION	D(1) AVERAGE DAILY PRODUCTION FROM: (12/01/2023 - 11/30/2024 - 12 mo period)	
E MAXIMUM WEEKLY PRODUCTION	E(1) AVERAGE WEEKLY PRODUCTION FROM: (12/01/2023 - 11/30/2024 - 12 mo period)	E MAXIMUM WEEKLY PRODUCTION	E(1) AVERAGE WEEKLY PRODUCTION FROM: (12/01/2023 - 11/30/2024 - 12 mo period)	
F MAXIMUM MONTHLY PRODUCTION	F(1) AVERAGE MONTHLY PRODUCTION FROM: (12/01/2023 - 11/30/2024 - 12 mo period)	F MAXIMUM MONTHLY PRODUCTION	F(1) AVERAGE MONTHLY PRODUCTION FROM: (12/01/2023 - 11/30/2024 - 12 mo period)	
G PRODUCTION FACILITY CONTACT		G TRANSFILL FACILITY CONTACT		
12 DISTRIBUTION INFORMATION FOR BLOCK 11				
A DAILY AVERAGE NUMBER OF TRUCKS / TANKERS / TRAILERS FROM: (06/01/2024 - 11/30/2024 - 6 mo Period)	B DAILY AVERAGE TRUCK / TANKER / TRAILER CAPACITY FROM: (06/01/2024 - 11/30/2024 - 6 mo Period)	C DAILY AVERAGE NUMBER OF DRIVERS FROM: (06/01/2024 - 11/30/2024 - 6 mo Period)		

Note 1: The contractor will furnish one point of contact, and an alternate if the contractor so desires, to receive placement of delivery orders by the Government (refer to Blocks 8 and 9)

Note 2: The contractor shall identify the primary production facility and the primary transfill facility that will produce and/or deliver helium to meet contract line item number requirements

CAPABILITY FORM NASA AGENCY -WIDE SUPPLY OF GASEOUS AND LIQUID HELIUM		1 DATE	2 CONTRACT LINE ITEM NUMBER	3 PAGE 1 OF 1
4 CONTRACTOR/OFFEROR NAME		5 SOLICITATION NUMBER 80KSC024R0010		6 CONTRACT NUMBER
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		9 CONTRACTOR/OFFEROR ALTERNATE CONTACT (Name, Email, Phone, Fax)		
10 PRIMARY PRODUCTION FACILITY		11 PRIMARY TRANSFILL FACILITY		
A ADDRESS		A ADDRESS		
B PROPELLANT HELIUM	C MAXIMUM FIXED STORAGE	B PROPELLANT HELIUM	C MAXIMUM FIXED STORAGE	
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Note 1: The contractor will furnish one point of contact, and an alternate if the contractor so desires, to receive placement of delivery orders by the Government (refer to Blocks 8 and 9)

Note 2: The contractor shall identify the primary production facility and the primary transfill facility that will produce and/or deliver helium to meet contract line item number requirements