

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b>	1. REQUISITION NUMBER SP0600-08-0760, 0762, 0770	PAGE 1 OF 56
<b>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24 &amp; 30</b>		

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER SP0600-09-R-0301	6. SOLICITATION ISSUE DATE <b>4 Feb 2009</b>
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<b>7. FOR SOLICITATION INFORMATION CALL:</b>	a. NAME  K. J. HARVEY	b. TELEPHONE NUMBER (No collect calls)  210-925-1965	8. OFFER DUE DATE/ LOCAL TIME 4 Mar 2009 12:00 PM
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9. ISSUED BY DEFENSE ENERGY SUPPORT CENTER (DESC-MK) 1014 BILLY MITCHELL BLVD. San Antonio, TX 78226 Email: <a href="mailto:Karen.harvey@dla.mil">Karen.harvey@dla.mil</a> K. J. Harvey (210)925-1965	CODE SP0600	10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED <input type="checkbox"/> SET ASIDE: % FOR  <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> HUBZONE SMALL BUS <input type="checkbox"/> 8(A)  NAICS: 325120 SIZE STANDARD: 1,000	11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE  <input type="checkbox"/> 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS(15 CFR 700)  13b. RATING	12. DISCOUNT TERMS
			14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP	

15. DELIVER TO SEE PART I, B1.09-2 SUPPLIES TO BE FURNISHED (INDEFINITE QUANTITY) (AEROSPACE ENERGY) (DESC APR 2006)	CODE	16. ADMINISTERED BY SEE BLOCK 9	CODE SP0600
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17a. CONTRACTOR/ OFFEROR	CODE	FACILITY CODE	18a. PAYMENT WILL BE MADE BY Defense Finance and Accounting Service Columbus Center ATTN: DFAS/BVDDB (Aerospace Energy) P. O. Box 182317 Columbus, OH 43218-2317	CODE HQ0104
TELEPHONE NO.			EFT:T	

<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER	18b. SUMMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED. <input type="checkbox"/> SEE ADDENDUM
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19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	SEE PART I, B1.09-2 SUPPLIES TO BE FURNISHED (INDEFINITE QUANTITY) (AEROSPACE ENERGY)(DESC APR 2006)  <i>(Use Reverse and/or Attach Additional Sheet as Necessary)</i>				

25. ACCOUNTING AND APPROPRIATION DATA	26. TOTAL AWARD AMOUNT (For Govt. Use Only)
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<input checked="" type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED <input checked="" type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.	<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4, FAR 52.212-5 IS ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.
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28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 1 COPIES <input type="checkbox"/> TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.	29. AWARD OF CONTRACT: REFERENCE DATED YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDES ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ALL ITEMS
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30a. SIGNATURE OF OFFEROR/CONTRACTOR	31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)
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30b. NAME AND TITLE OF SIGNER (Type or Print)	30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER (Type or print)  BRADLEY W. STATON	31c. DATE SIGNED
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**PART I – SF 1449 CONTINUED****IMPORTANT NOTICES TO OFFERORS:**

1. The Government plans to award a four year, four month Firm Fixed-Price Requirements-Type contract(s) for Liquid Oxygen (LOX) and Liquid Nitrogen (LN2) as specified in the schedule. The Government will evaluate in accordance with M2.14 EVALUATION – COMMERCIAL ITEMS (AEROSPACE ENERGY)(DESC OCT 2008). Please see L2.35 PROPOSAL FORMAT AND CONTENT (AEROSPACE ENERGY)(DESC OCT 2008) for additional information. This Request for Proposal may result in multiple awards. Offerors may propose a stand alone price for each of the product CLINs 0001 – 0012.
2. When pricing Hot Fills on SUBCLINS 0001AG, 0002AG, 0003AG, 0004AF, 0005AG, 0006AG, 0007AF, 0008AG, 0009AG, 0010AG, 0011AG, AND 0012AF, please enter pricing on these lines or if pricing for these items is included in your product price please indicate this by entering Not Separately Priced (“NSP”) on these items
3. The pricing of the offeror’s proposal shall be consistent with paragraph (a)(i) of Clause L2.35 PROPOSAL FORMAT AND CONTENT (AEROSPACE ENERGY)(DESC OCT 2008).
4. Central Contractor Registration (CCR) is required and is available at [www.ccr.gov](http://www.ccr.gov) or (888) 227-2423.
5. For questions regarding Small Business or Small Disadvantage Business subcontracting affairs, offerors are directed to Mrs. Lula Manley of the DESC Small Business Office at 1-800-526-2601 or 703-767-9465.
6. The address for overnight delivery of proposals resulting from this solicitation is as follows:

Department of Defense  
 Defense Energy Support Center  
 Attn: K. J. Harvey  
 1014 Billy Mitchell Blvd  
 San Antonio, Texas 78226

**SOLICITATION FORMAT**

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**PART I – SF 1449 CONTINUED****B1.09-2 SUPPLIES TO BE FURNISHED (INDEFINITE QUANTITY) (AEROSPACE ENERGY) (DESC APR 2006)**

(a) This is an indefinite quantity contract for the purchase of supplies (and/or services, if applicable) to be furnished during the contract term. The delivery points, methods of delivery, and estimated quantities are specified in the Schedule as contract line item numbers (CLINs). The quantities shown are best estimates of required Government quantities only. Unless otherwise specified, the total quantity ordered and required to be delivered/loaded may be greater than or less than such quantities as allowed by the VARIATION IN QUANTITY clause.

(b) The following provisions apply **ONLY** if the applicable box is checked:

- (1) [  ] This is a REQUIREMENTS-TYPE contract. The Government agrees to order from the Contractor and the Contractor shall deliver, if orders are placed by the DESC Contracting Officer during the contract period, all items awarded under this contract, as allowed by the REQUIREMENTS clause. A Blanket Delivery Order is considered “an order”, for the purposes of this clause.
- (2) [  ] This is an INDEFINITE DELIVERY/INDEFINITE QUANTITY contract. The Government agrees to order from the Contractor and the Contractor shall deliver, if orders are placed by the Contracting Officer during the contract period, at least the quantity of supplies or services designated in the Schedule as the

“minimum”, as allowed by the INDEFINITE QUANTITY clause. A Blanket Delivery Order is considered “an order”, for the purposes of this clause

- (3) [ X ] Orders issued by the Ordering Officer at the destination location are considered extensions of the Blanket Delivery Order issued by the DESC Contracting Officer and, as such, may be issued orally, by facsimile or by electronic commerce methods, as allowed by the ORDERING clause.
- (4) [ X ] The unit prices specified below shall be fixed for the term of the contract.
- (5) [ ] The prices paid shall be the unit prices specified in subsequent price change modifications issued in accordance with the ECONOMIC PRICE ADJUSTMENT – STANDARD SUPPLIES clause, as contained in the Schedule.
- (6) [ ] The prices paid shall be the unit prices specified in subsequent price change modifications issued in accordance with the ECONOMIC PRICE ADJUSTMENT – SEMISTANDARD SUPPLIES clause, as contained in the Schedule.
- (7) [ X ] Items of this contract call for f.o.b. destination delivery, unless the item specifies otherwise. The destination for each item is the point of delivery shown in the particular item. Inspection for quality will be at origin with final acceptance at destination. Applicable to product CLIN(s) 0001 through 0012.
- (8) [ X ] F.o.b. destination item(s) called for under this contract shall have shipment quantity determinations performed at destination.
- (9) [ ] Items of this contract call for f.o.b. origin delivery, unless the item specifies otherwise. Inspection and acceptance will be at origin.
- (10) [ X ] Any offers received for less than the full quantity for each line item will be rejected by the Government.
- (11) [ ] A copy of the certified weight ticket shall accompany each shipment.
- (12) [ X ] A copy of the Certificate of Analysis shall accompany each shipment.
- (13) [ X ] An original and one copy of the H-14 Transport Equipment Delay Certificate shall be provided with each shipment, if applicable.

(DESC 52.207-9F79)

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0001	LIQUID OXYGEN, TYPE II, GRADE “A” IAW MIL-PRF-25508G, DATED 21 Nov 06, NSN: 9135-00-965-2527, DELIVERED FOB DESTINATION TO CAPE CANAVERAL AIR FORCE STATION, FL			
0001AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	484 TONS	_____	_____
0001AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	484 TONS	_____	_____
0001AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	484 TONS	_____	_____
0001AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	485 TONS	_____	_____
0001AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	121 TONS	_____	_____
0001AF	SERVICES, NON-ROUTINE DELIVERIES IAW C-900, Section 1, paragraph 4.b.	PER OCCURRENCE	_____	_____
0001AG	SERVICES, HOT FILL, IAW C-900, Section 1, paragraph 10.	PER OCCURRENCE	_____	_____

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0001AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR		_____
SHIP TO:	SPACE GATEWAY SERVICES (SGS), Propellants North, Bldg. K7-416, Cape Canaveral AFS, FL 32815			
0002	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO CAPE CANAVERAL AFS, FL			
0002AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	2,084 TONS	_____	_____
0002AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	2,084 TONS	_____	_____
0002AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	2,084 TONS	_____	_____
0002AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	2,084 TONS	_____	_____
0002AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	526 TONS	_____	_____
0002AF	SERVICES, NON-ROUTINE DELIVERIES IAW C-900, Section 1, paragraph 4.b.	PER OCCURRENCE		_____
0002AG	SERVICES, HOT FILL IAW C-900, Section 1, paragraph 10.	PER OCCURRENCE		_____
0002AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR		_____
SHIP TO:	SPACE GATEWAY SERVICES (SGS), Propellants North, Bldg. K7-416, Cape Canaveral AFS, FL 32815			
0003	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO U.S. ARMY SPACE AND MISSILE DEFENSE COMMAND HIGH ENERGY LASER SYSTEMS TEST FACILITY, (HELSTF), WHITE SANDS MISSILE RANGE, NM			

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0003AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	1,500 TONS	_____	_____
0003AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	1,500 TONS	_____	_____
0003AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	1,500 TONS	_____	_____
0003AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	1,500 TONS	_____	_____
0003AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	500 TONS	_____	_____
0003AF	SERVICES, EMERGENCY DELIVERIES, IAW C-900, Section 2, paragraph 4. a.	PER OCCURRENCE	_____	_____
0003AG	SERVICES, HOT FILL IAW C-900, Section 2, paragraph 10.	PER OCCURRENCE	_____	_____
0003AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR	_____	_____
SHIP TO:	U.S. Army Space & Missile Defense Command High Energy Laser System Test Facility (HELSTF) US Hwy 70, Mile Marker 186 White Sands Missile Range, NM 88002-5510			
0004	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO U.S. ARMY WHITE SANDS MISSILE RANGE, NM			
0004AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	348 TONS	_____	_____
0004AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	348 TONS	_____	_____
0004AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	348 TONS	_____	_____
0004AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	348 TONS	_____	_____

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0004AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	87 TONS	_____	_____
0004AF	SERVICES, HOT FILL IAW C-900, Section 2, paragraph 10.	PER OCCURRENCE	_____	_____
0004AG	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR	_____	_____
SHIP TO:	U.S. Army White Sands Missile Range, CSTE DTC WS-ST-AA Site 300K and LC 33 White Sands Missile Range, NM 88002-5157			
0005	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO NASA WHITE SANDS TEST FACILITY, WHITE SANDS MISSILE RANGE, NM			
0005AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	5,202 TONS	_____	_____
0005AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	2,775 TONS	_____	_____
0005AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	1,836 TONS	_____	_____
0005AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	1,836 TONS	_____	_____
0005AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	459 TONS	_____	_____
0005AF	SERVICES, EMERGENCY DELIVERIES, IAW C-900, Section 2, paragraph 4.c.	PER OCCURRENCE	_____	_____
0005AG	SERVICES, HOT FILL IAW C-900, Section 2, paragraph 10.	PER OCCURRENCE	_____	_____

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0005AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR		_____
SHIP TO:	NASA/JSC/White Sands Test Facility Attn: Transportation Office 12600 NASA Road Las Cruces, NM 88012			
0006	LIQUID OXYGEN, TYPE II, GRADE "A" IAW MIL-PRF-25508G, DATED 21 NOV 2006, NSN: 9135-00-965-2527 DELIVERED FOB DESTINATION TO NASA WHITE SANDS TEST FACILITY, WHITE SANDS MISSILE RANGE, NM			
0006AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	1,304 TONS	_____	_____
0006AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	1,134 TONS	_____	_____
0006AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	1,134 TONS	_____	_____
0006AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	1,154 TONS	_____	_____
0006AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	284 TONS	_____	_____
0006AF	SERVICES, EMERGENCY DELIVERIES, IAW C-900, Section 2, paragraph 4. c.	PER OCCURRENCE		_____
0006AG	SERVICES, HOT FILL IAW C-900, Section 2, paragraph 10.	PER OCCURRENCE		_____
0006AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR		_____
SHIP TO:	NASA/JSC/White Sands Test Facility Attn: Transportation Office 12600 NASA Road Las Cruces, NM 88012			

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0007	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO KIRTLAND AIR FORCE BASE, NM			
0007AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	1,655 TONS	_____	_____
0007AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	1,735 TONS	_____	_____
0007AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	1,815 TONS	_____	_____
0007AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	1,968 TONS	_____	_____
0007AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	499 TONS	_____	_____
0007AF	SERVICES, HOT FILL IAW C-900, Section 2, paragraph 10.	PER OCCURRENCE		_____
0007AG	SERVICES, TANK LEASE IAW C-900, Section 2, paragraph 12. BLDG 400 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____
0007AH	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 400 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____
0007AJ	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 418 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____
0007AK	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 243 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0007AL	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 322 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____
0007AM	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 416 – 1 EACH 3,000 GAL/10 TN CAPACITY	51 MONTHS	_____	_____
0007AN	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 761 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____
0007AP	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 617 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____
0007AQ	SERVICES, TANK LEASE IAW C-900 Section 2, paragraph 12. BLDG 29051 – 1 EACH 1,500 GAL/5 TN CAPACITY	51 MONTHS	_____	_____
0007AR	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR	_____	_____
0007AS	SERVICES, TANK INSTALLATION IAW C-900 Section 2, paragraph 13.	9 EACH	_____	_____
0007AT	SERVICES, TANK REMOVAL IAW C-900 Section 2, paragraph 13.	9 EACH	_____	_____
SHIP TO:	(2 Locations)  377 LG/LGRF 3300 Lowry Ave SE Kirtland AFB, NM 87117-5350  21 <sup>st</sup> EOD Bldg. 29051, Lovelace Road Kirtland AFB, NM 87117			

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0008	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO PRATT & WHITNEY, JUPITER, FL			
0008AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	272 TONS	_____	_____
0008AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	272 TONS	_____	_____
0008AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	272 TONS	_____	_____
0008AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	272 TONS	_____	_____
0008AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	68 TONS	_____	_____
0008AF	SERVICES, NON-ROUTINE DELIVERIES IAW C-900, Section 3, paragraph 3.	PER OCCURRENCE		_____
0008AG	SERVICES, HOT FILL IAW C-900, Section 3, paragraph 10.	PER OCCURRENCE		_____
0008AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR		_____
SHIP TO:	Pratt & Whitney Rocketdyne (FL), ATTN: Area E Fuel Farm 17900 Beeline Highway, Jupiter, FL 33478			
0009	LIQUID OXYGEN, TYPE II, GRADE "A" IAW MIL-PRF-25508G, DATED 21 Nov 06, NSN: 9135-00-965-2527, DELIVERED FOB DESTINATION TO PRATT & WHITNEY, JUPITER, FL			
0009AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	272 TONS	_____	_____
0009AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	272 TONS	_____	_____
0009AC	YEAR THREE 01 JUL 2011 THROUGH 30 JUN 2012	272 TONS	_____	_____
0009AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	272 TONS	_____	_____

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0009AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	68 TONS	_____	_____
0009AF	SERVICES, NON-ROUTINE DELIVERIES IAW C-900, Section 3, paragraph 3.	PER OCCURRENCE	_____	_____
0009AG	SERVICES, HOT FILL, IAW C-900, Section 3 paragraph 10.	PER OCCURRENCE	_____	_____
0009AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR	_____	_____
SHIP TO:	Pratt & Whitney Rocketdyne (FL), ATTN: Area E Fuel Farm 17900 Beeline Highway, Jupiter, FL 33478			
0010	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO VANDENBERG AFB, CA			
0010AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	3,681 TONS	_____	_____
0010AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	2,669 TONS	_____	_____
0010AC	YEAR THREE 1 JUL 2011 THROUGH 30 JUN 2012	2,669 TONS	_____	_____
0010AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	2,669 TONS	_____	_____
0010AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	165 TONS	_____	_____
0010AF	SERVICES, EMERGENCY DELIVERIES IAW C-900, Section 4, paragraph 4. b.	PER OCCURRENCE	_____	_____
0010AG	SERVICES, HOT FILL IAW C-900, Section 4, paragraph 12.	PER OCCURRENCE	_____	_____
0010AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR	_____	_____

SHIP TO: AEROSPACE Maintenance and Operations Center  
 United Paradyne Corp, Bldg. 7525  
 Vandenberg AFB, CA 93437-5398

MARK FOR: DLA INVENTORY  
 ACTIVITY CODE: XUMU

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0011	LIQUID OXYGEN, TYPE II, GRADE "A" IAW MIL-PRF-25508G, DATED 21 Nov 06, NSN: 9135-00-965-2527, DELIVERED FOB DESTINATION TO VANDENBERG AFB, CA			
0011AA	YEAR ONE 1 JUL 2009 THROUGH 30 JUN 2010	1,614 TONS	_____	_____
0011AB	YEAR TWO 1 JUL 2010 THROUGH 30 JUN 2011	2,102 TONS	_____	_____
0011AC	YEAR THREE 01 JUL 2011 THROUGH 30 JUN 2012	1,739 TONS	_____	_____
0011AD	YEAR FOUR 1 JUL 2012 THROUGH 30 JUN 2013	1,739 TONS	_____	_____
0011AE	YEAR FIVE 1 JUL 2013 THROUGH 30 SEP 2013	225 TONS	_____	_____
0011AF	SERVICES, EMERGENCY DELIVERIES IAW C-900, Section 4, paragraph 4.b.	PER OCCURRENCE		_____
0011AG	SERVICES, HOT FILL, IAW C-900, Section 4, paragraph 12.	PER OCCURRENCE		_____
0011AH	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR		_____

SHIP TO: SHIP TO: AEROSPACE Maintenance and Operations Center  
 United Paradyne Corp, Bldg. 7525  
 Vandenberg AFB, CA 93437-5398

MARK FOR: DLA INVENTORY  
 ACTIVITY CODE: XUMU

<u>ITEM</u>	<u>SUPPLIES/SERVICES</u>	<u>ESTIMATED QTY/UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
0012	LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 JAN 2008, NSN: 9135-00-965-2526 DELIVERED FOB DESTINATION TO ROBINS AFB, GA			
0012AA	YEAR ONE 5 JUN 2009 THROUGH 04 JUN 2010	2,433 TONS	_____	_____
0012AB	YEAR TWO 5 JUN 2010 THROUGH 04 JUL 2011	2,667 TONS	_____	_____
0012AC	YEAR THREE 5 JUN 2011 THROUGH 04 JUL 2012	2,767 TONS	_____	_____
0012AD	YEAR FOUR 05 JUN 2012 THROUGH 04 JUL 2013	2,866 TONS	_____	_____
0012AE	YEAR FIVE 05 JUN 2013 THROUGH 30 SEP 2013	967 TONS	_____	_____
0012AF	SERVICES, HOT FILL IAW C-900, Section 5, paragraph 10.	PER OCCURRENCE		_____
0012AG	DETENTION COST, Established IAW Clause F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY)(DESC APR 2006)	PER ¼ HOUR		_____

**SHIP TO:** 775 Macon Street, Bldg. 1555  
Robins AFB, GA 31098-2201

NOTE 1: SubCLINS, SERVICES – "HOT FILL" TANK; EMERGENCY AND NON-ROUTINE DELIVERIES; AND DETENTION under CLINS 0001 thru 0012 may or may not be required, there is no Estimated Quantity. As such, proposed unit prices will not be evaluated as part of price evaluation in the award of a contract.

NOTE 2: Pricing on tank leases, SubClins, 0007AG through 0007AQ, requires pricing on a "price per month" basis.

### DESCRIPTION/SPECIFICATIONS

#### **C1.02 DODISS SPECIFICATIONS (DESC OCT 2000)**

Unless otherwise specified, the issues of Federal and Military specifications, standards, and related standardization documents and those non-Government standards adopted for Department of Defense use, which are cited in this solicitation/contract, are those listed in the most recent Department of Defense Index of Specifications and Standards (DODISS) and any applicable supplement. The basic DODISS is issued on July 1<sup>st</sup> every year; supplementals thereto are issued every other month thereafter, those dates being September 1<sup>st</sup>, November 1<sup>st</sup>, January 1<sup>st</sup>, March 1<sup>st</sup>, and May 1<sup>st</sup>.

(DESC 52.246-9FT1)

**C900 STATEMENT OF OBJECTIVES/WORK AND/OR SPECIFICATIONS (AEROSPACE ENERGY)  
(DESC APR 2006)**

**SECTION 1 – Cape Canaveral Air Force Station, FL**

1. DESCRIPTION OF REQUIREMENT: The Defense Energy Support Center (DESC), Defense Logistics Agency, as the Department of Defense (DoD) Integrated Materiel Manager (IMM) for Aerospace Energy products and services, requires production and delivery of Liquid Oxygen (LOX) and Liquid Nitrogen (LN<sub>2</sub>) in support of various Air Force and commercial customers at Cape Canaveral Air Force Station, FL. The Contractor shall provide all production, raw materials, supplies, management, tools, equipment, labor and transportation necessary for the manufacture and delivery of LOX and LN<sub>2</sub> on an FOB Destination basis for the various customers at Cape Canaveral Air Force Station. The LOX will be used as an oxidizer (propellant) in support of the Atlas, Centaur, and Delta Launch Vehicles. The LN<sub>2</sub> will be used to sub-cool the LOX and chill-down gaseous helium supplied to the launch vehicles, used for portable Environmental Control Shelter (ECS) vans, and used for mechanical laboratory testing.

2. PRODUCT SPECIFICATIONS AND TESTING REQUIREMENTS:

a. LOX shall conform to the requirements of specification MIL-PRF-25508G, Propellant Oxygen, Type II, Grade A, dated November 21, 2006. In addition, the particulate test specified in Table I of the specification is required for LOX.

b. LN<sub>2</sub> shall conform to the requirements of specification MIL-PFR-27401F, Propellant Pressurizing Agent, Nitrogen, Type II, Grade B, dated January 10, 2008. In addition, the particulate test specified in Table I of the specification is required for LN<sub>2</sub>.

c. One copy of a Certificate of Analysis for each sample required by the specification shall be sent to DESC- QA/QT within three days after the analysis of that sample. The analysis report shall be emailed to [tech.prop@dla.mil](mailto:tech.prop@dla.mil) or faxed to the attention of DESC-Q at (210) 925-8048.

3. PRODUCT DELIVERY HOURS:

a. At Space Launch Complex (SLC) 41, routine deliveries of LN<sub>2</sub> shall arrive at the customer's location between 0800 to 1600 hours, Monday through Friday, excluding federal holidays, for all locations. On occasion, due to launch requirements, non-routine product deliveries shall be accomplished during other than normal duty hours or on weekends.

b. At SLC-17, routine deliveries shall arrive at the customer's location between 0700 to 1530 hours, 7 days a week, to include holidays. Non-routine product deliveries shall be accomplished during other than normal duty hours, 7 days a week, to include any and all holidays.

c. In the event of a launch or wet dress rehearsal (WDR) the Contractor will be notified to place four (4) LOX tankers on standby. If the WDR or launch is successful, the four full tankers will not be scheduled for delivery. In case of a launch scrub, the four full tankers shall be delivered to the SLC at a scheduled time within three (3) hours.

d. In the event of a launch or WDR, the Contractor will be notified to place four (4) LN<sub>2</sub> tankers on standby. If the WDR or launch is successful, the four full tankers will not be scheduled for delivery. In case of a launch scrub, the four full tankers shall be delivered to the SLC at a scheduled time within seven (7) hours.

4. PRODUCT DELIVERY LEAD-TIME:

a. Routine product deliveries shall be within forty-eight (48) hours after receipt of an order from the United Launch Alliance appointed Ordering Officer for SLC 41 and within twenty-four (24) hours after receipt of an order from the United Launch Alliance appointed Ordering Officer for SLC 17.

b. Non-routine product deliveries (weekends, holidays and after normal duty hours) shall be accomplished at SLC 41 and SLC 17 within twenty-four (24) hours after receiving an order from the appointed United Launch Alliance Ordering Officer.

5. PRODUCT ORDERS: The DESC Contracting Officer will issue blanket Delivery Orders (DD Form 1155) for obligation of funds for orders to be used during that specific timeframe by the appointed Ordering Officer IAW Clause I211, ORDERING. The individual orders placed by the appointed Ordering Officer will designate the specific quantity to be delivered at the customer location specified in the contract.

6. SHIP PRODUCT TO:

Space Gateway Services (SGS)  
 Propellants North  
 Bldg. K7-416  
 Cape Canaveral AFS, FL 32815

7. INSPECTION AND ACCEPTANCE: Inspection for quality shall be performed at origin. Quantity determination and acceptance shall be at destination.

8. METHOD OF MEASUREMENT: Method of measurement shall be by truck mounted calibrated flow meter or by calibrated weight scales. Certified scales are available at Propellants North, Bldg. K7-416.

9. DESCRIPTION OF CUSTOMER PROVIDED EQUIPMENT:

Owner / Tank # / Product Type	Location	Storage Capacity (gals/tns)	Tank Operating Pressure During Loading from Tanker	Tank Max. Pressure
Air Force #1 LOX	SLC-17	35,000 gals / approx. 167 tns	0 psig	100 psig
Air Force #1 LN <sub>2</sub>	SLC-17	28,000 gals/ approx. 94 tns	50 psig	70 psig
Lockheed #1 LN <sub>2</sub>	SLC-41	5,500 gals / approx. 17 tns	5 psig	200 psig
Lockheed #3 LN <sub>2</sub>	SLC-41	700 gal dewer		50 psig
Lockheed #2 LN <sub>2</sub>	VIF	700 gals / approx. 3 tns	300 psig	350 psig

NOTE: Space Launch Complex (SLC)  
 Vertical Integration Facility (VIF)

10. HOT FILLS: Occasionally, the contractor may be required to perform a “Hot Fill” in order to cool-down and refill any tank that has become empty and is warm.

11. SECURITY REQUIREMENTS: For access to the premises, the driver is required to be a U.S. citizen, have a valid driver’s license, and obtain a badge at entrance gate. A second form of ID will be required to obtain access; must bring either the driver’s birth certificate, passport (current or expired), or social security card.

12. CONTRACTOR FURNISHED EQUIPMENT: Contractor shall provide wheel chocks and grounding strap.

13. DESCRIPTION OF INTERFACE BETWEEN CUSTOMER’S EXISTING LINES / EQUIPMENT AND SUPPLIER’S HANDLING EQUIPMENT: It is the supplier’s responsibility to provide storage tank inlet fitting for transfer hose to connect with CLO2-Future Craft 550043-30-002 Aluminum (P/N obsolete; replacement P/N (E-30-024), BLO2-Future Craft 550043-30-204 (SS-30-013).

**SECTION 2 – White Sands Missile Range / Kirtland Air Force Base**

1. DESCRIPTION OF REQUIREMENT: The Defense Energy Support Center (DESC), Defense Logistics Agency, as the Department of Defense (DoD) Integrated Materiel Manager (IMM) for Aerospace Energy products and services, requires production and delivery of Liquid Oxygen (LOX) and Liquid Nitrogen (LN<sub>2</sub>) in support of various customers at White Sands Missile Range, NM and Kirtland Air Force Base, NM. The Contractor shall provide all production, raw materials, supplies, management, tools, equipment, labor and transportation necessary for the manufacture and delivery of LN<sub>2</sub> and LOX on an FOB Destination basis for various Kirtland AFB and White Sands customers. The LN<sub>2</sub> will be used in support of cryogenic storage, valve actuation, purge functions, and laser beam path conditioning at U.S. Army Space & Missile Defense Command, High Energy Laser System Test Facility (HELSTF), NM; to temperature condition rockets and missiles to -60 degrees F when placed inside a conditioning shroud at CSTE-DTC-WS-ST-AA, Site 300K & LC33, U.S. Army White Sands Missile Range, NM; used as a purge and pressurant gas, as a coolant to cool liquid rocket propellants to meet specific test requirements and to cool liquid traps for condensing vapors out of gas streams at NASA White Sands Test Facility, NM; and used for research, Airborne Laser Program and Vacuum Chamber Simulator, and to support High Purity Germaniums (HPGe) equipment operations at Kirtland AFB, NM. The LOX will be used for mixing with LN<sub>2</sub> for various systems of the Space Shuttle and The Fleet Leader at NASA White Sands Test Facility.

## 2. PRODUCT SPECIFICATIONS AND TESTING REQUIREMENTS:

a. LOX shall conform to the requirements of specification MIL-PRF-25508G, Propellant, Oxygen, Type II, Grade A, dated November 21, 2006. In addition, particulate tests are required with the results being delivered with the load at NASA White Sands Test Facility.

b. LN<sub>2</sub> shall conform to the requirements of specifications MIL-PFR-27401F, Propellant Pressurizing Agent, Nitrogen, Type II, Grade B, dated January 10, 2008. In addition, the particulate test specified in Table I of the specification is required at the HELSTF and NASA White Sands Test Facility.

c. One copy of a Certificate of Analysis for each sample required by the specification shall be sent to DESC-QA/QT within three days after the analysis of that sample. The analysis report shall be emailed to [tech.prop@dla.mil](mailto:tech.prop@dla.mil) or faxed to the attention of DESC-Q, (210) 925-8048.

## 3. PRODUCT DELIVERY HOURS:

a. At the HELSTF, deliveries shall arrive between 7:30 a.m. to 3:00 p.m., Monday through Thursday and on Fridays by appointment (closed every other Friday) excluding federal holidays.

b. At U.S. Army White Sands Missile Range, deliveries shall arrive between 7:15 a.m. to 4:30 p.m., Monday through Friday excluding federal holidays.

c. At NASA White Sands Test Facility, deliveries shall arrive between 8:00 a.m. to 2:30 p.m., Monday through Thursday and alternate Fridays, excluding federal holidays.

d. At Kirtland AFB, deliveries shall arrive between 7:00 a.m. to 4:00 p.m., Monday through Friday excluding federal holidays.

## 4. PRODUCT DELIVERY LEAD-TIME:

a. HELSTF: Product shall be delivered within seventy-two (72) hours after receipt of an order from the appointed Ordering Officer, unless a longer period of time is stated on the order. Emergency product deliveries shall be accomplished within 24 - 48 hours after receiving an order from the customer.

b. U.S. Army White Sands Missile Range: Product shall be delivered within seventy-two (72) hours after receipt of an order from the appointed Ordering Officer, unless a longer period of time is stated on the order.

c. NASA White Sands Test Facility: Product shall be delivered within forty-eight (48) hours after receipt of an order from the appointed Ordering Officer, unless a longer period of time is stated on the order. During emergency situations, loads will be needed within a thirty-six (36) hour lead time.

d. Kirtland AFB, NM: Product shall be delivered within forty-eight (48) hours after receipt of an order from the appointed Ordering Officer, unless a longer period of time is stated on the order.

5. PRODUCT ORDERS: The DESC Contracting Officer will issue blanket Delivery Orders (DD Form 1155) for obligation of funds for orders to be issued during that specific timeframe by the appointed Ordering Officer IAW Clause I211, ORDERING. The individual orders placed by the appointed Ordering Officer will designate the specific quantity to be delivered at the customer location specified in the contract.

## 6. SHIP PRODUCT TO:

U.S. Army Space & Missile Defense Command  
High Energy Laser System Test Facility (HELSTF)  
US Hwy 70, Mile Marker 186  
White Sands Missile Range, N.M. 88002-5510

U.S. Army White Sands Missile Range  
CSTE-DTC-WS-ST-AA  
Site 300K and LC33  
White Sands Missile Range, N.M. 88002-5157

NASA/JSC/White Sands Test Facility  
 Attn: Transportation Office  
 12600 NASA Road  
 Las Cruces, NM 88012

377 LGILGSF  
 3300 Lowry Ave SE  
 Kirtland AFB, N.M. 87117-5350

and

21<sup>st</sup> EOD  
 Bldg 29051  
 Lovelace Road  
 Kirtland AFB, NM 87117

7. INSPECTION AND ACCEPTANCE: Inspection for quality shall be performed at origin. Quantity determination and acceptance shall be at destination.

8. METHOD OF MEASUREMENT: Method of measurement shall be by truck mounted calibrated flow meter or by calibrated weight scales.

- a. For the HELSTF, a certified truck mounted meter is acceptable.
- b. For White Sands Missile Range, scales are available 7:15 a.m. to 4:30 p.m., Monday through Friday, excluding federal holidays.
- c. Scales are certified and available at NASA/JSC/WSTF. Scales are available from 8:00 a.m. to 2:30 p.m., Monday through Thursday and alternate Fridays.
- d. Certified Scales are not available at Kirtland AFB; therefore, quantity shall be determined by certified mounted truck flow meter.

9. DESCRIPTION OF CUSTOMER PROVIDED EQUIPMENT:

- a. Description of Government Owned LN<sub>2</sub> Tank Storage at the HELSTF, N.M.

Location	Number of Tanks	Capacity (Gallons/Tons)
22 Miles NE of WSMR	1	28,000 gal/94.5 TN

- b. Description of Government Owned LN<sub>2</sub> Tank Storage at U.S. Army White Sands Missile Range, N.M.

Location	Number of tanks	Capacity (Gallons/Tons)
300K/LC33	1	12,000 gal/40 TN

- c. Description of Government Owned LN<sub>2</sub> & LOX Tank Storage at NASA White Sands Test Facility, NM.

(1) LN<sub>2</sub>

Location	Number of Tanks	Capacity (Gallons/Tons)
T-115/Site 200	1	5,000 gal/16.6 TN
T-118/Site WSSH	1	5,000 gal/16.6 TN
T-127/Site 400	1	1,000 gal/3.3 TN
T-128/Site 300	1	300 gal/1 TN
T-129/Site WSSH	1	300 gal/1 TN
T-130/Site 800	1	300 gal/1 TN
T-156/Site 300	1	150 gal/0.5 TN
T-230 Site WSSH	1	1,800 gal/6 TN
T-232/Site 400	1	1,800 gal/6 TN
T246/Site 700	1	500 gal/1.6 TN
Storage Site 500	1	10,000 gal/33.3 TN
Storage Site 400	1	15,000 gal/50 TN

## (2) LOX

Location	Number of Tanks	Capacity (Gallons/Tons)
T-113	1	2,000 gal/6.6 TN
T-151	1	150 gal/0.5 TN
T-171/Site 800	1	500 gal/1.6 TN
T-246/Site 700	1	500 gal/1.6 TN
Storage Site 250	1	9,000 gal/30 TN
Storage Site 800	1	9,000 gal/30 TN

d. Description of Government Owned LN<sub>2</sub> Tank Storage at Kirtland AFB, N.M.

Location	Number of Tanks	Capacity (Gallons/Tons)
Bldg 418	1	1,500 gal/5 TN
Bldg 617	1	28,000 gal/94.5 TN
	1	5,000 gal/16.9 TN
Bldg 595	1	1,500 gal/5 TN
Bldg 30134	1	400 gal/1.4 TN
Bldg 66045	1	3,000 gal/10 TN
Bldg 472	3	1,500 gal/5 TN
Bldg 472 Bldg 277	3	1,500 gal/5 TN
		3,000 gal/10 TN
		400 gal/1.4 TN
Bldg 277	1	1,700 gal/5.7 TN
Bldg 277*	2	13,000 gal/43.3 TN
		13,000 gal/43.3 TN

\* These tanks are leased by Kirtland AFB through a separate contract.

10. HOT FILLS: Occasionally the contractor may be required to perform a "Hot Fill" in order to cool-down and refill any tank that has gone empty and is warm.

11. SECURITY REQUIREMENTS:

a. For entry clearance at Kirtland AFB, the HELSTF, and White Sands Missile Range (Site 300K & LC33), the driver must be a U.S. citizen and must possess a photo ID that displays driver's full name, social security number, and date of birth. Driver must also be able to provide proof of insurance and vehicle registration. The facility may require the driver to be escorted while making deliveries and the delivery vehicle is subject to search by security personnel prior to accessing the facility.

b. Prior to making deliveries at Kirtland AFB, the HELSTF, and White Sands Missile Range (Site 300K & LC33); the Contractor shall provide a list of drivers names with the above mentioned entry clearance information to include place of birth and citizenship to each potential delivery location with a request that it be provided to facility access security personnel.

c. At NASA White Sands Test Facility, personnel are required to escort delivery personnel for offloads. Trailers will be inspected by security personnel upon arrival at the White Sands Test Facility gate, and released to escort by White Sands Test Facility off-load personnel.

d. Notice of delivery with drivers(s) identification shall be done at least forty-eight 48 hours before delivery to the HELSTF.

12. CONTRACTOR FURNISHED EQUIPMENT: Contractor shall provide wheel chocks and grounding strap.

a. Description of Contractor Provided LN<sub>2</sub> Tank Storage Requirements at Kirtland AFB, NM

Location	Number of Tanks	Capacity (Gallons/Tons)
Bldg 400	2	1,500 gal/5 TN 1,500 gal/5 TN
Bldg 418	1	1,500 gal/5 TN
Bldg 243	1	1,500 gal/5 TN
Bldg 322	1	1,500 gal/5 TN
Bldg 416	1	3,000 gal/10 TN
Bldg 761	1	1,500 gal/5 TN
Bldg 617	1	1,500 gal/5 TN
Bldg 29051	1	1,500 gal/5 TN

Note: Contractor provided tanks will be required at Kirtland AFB through duration of the contract and the contractor will be required to maintain and service tanks at their own expense.

13. REMOVAL, INSTALLATION AND MAINTENANCE OF CONTRACTOR-PROVIDED TANKS AND EQUIPMENT:

Contractor shall install their Contractor-provided tanks/ equipment at the beginning of the contract period, maintain their Contractor-provided tanks/ equipment during the contract period, and remove their tanks/equipment at the end of the contract period at the Contractor's expense. Contractor provided tanks may be chilled through initial deliveries, but initial deliveries into Contractor provided tanks shall not qualify as a "Hot Fill" service. The Contractor shall coordinate with the current supplier to effect removal of the current equipment and installation of new equipment, or to retain the current equipment. The Contractor may be required to provide a temporary system during change out of the existing system or tanks to eliminate any delay to supply of product.

14. DESCRIPTION OF INTERFACE BETWEEN CUSTOMER'S EXISTING LINES / EQUIPMENT AND SUPPLIER'S HANDLING EQUIPMENT: Driver needs to bring storage tank inlet fitting for transfer hose to connect with CLO2-Future Craft 550043-30-002 Aluminum (P/N obsolete; replacement P/N (E-30-024), BLO2-Future Craft 550043-30-204 (SS-30-013).

### SECTION 3 – Pratt & Whitney – Jupiter, FL

1. DESCRIPTION OF REQUIREMENT: The Defense Energy Support Center (DESC), Defense Logistics Agency, as the Department of Defense (DoD) Integrated Materiel Manager (IMM) for Aerospace Energy products and services, requires production and delivery of Liquid Oxygen (LOX) and Liquid Nitrogen (LN<sub>2</sub>) in support of various customers at Pratt & Whitney, FL. The Contractor shall provide all production, raw materials, supplies, management, tools, equipment, labor and transportation necessary for the manufacture and delivery of LN<sub>2</sub> and LOX on an FOB Destination basis for Pratt & Whitney. The LN<sub>2</sub> will be used as a cryogenic calibration fluid for rocket engine programs and to provide gaseous nitrogen which is used to purge and pressurize systems containing both gaseous hydrogen and oxygen, to cool test components during bench tests. The LOX will be used to pressurize, run and purge rocket engines, components and rigs as well as run tanks, storage tanks and bottles, to purge electrical boxes, blanket hydraulic reservoir to keep moisture out, engine fire quench system, calibrate transducers and gages, to purge and pressurize test rigs and stand systems.

2. PRODUCT SPECIFICATIONS AND TESTING REQUIREMENTS:

a. LOX shall conform to the requirements of specification MIL-PRF-25508G, Propellant, Oxygen, Type II, Grade A, dated November 21, 2006.

b. LN<sub>2</sub> shall conform to the requirements of specifications MIL-PFR-27401F, Propellant Pressurizing Agent, Nitrogen, Type II, Grade B, dated January 10, 2008.

c. One copy of a Certificate of Analysis for each sample required by the specification shall be sent to DESC-QA/QT within three days after the analysis of that sample. The analysis report shall be emailed to [tech.prop@dla.mil](mailto:tech.prop@dla.mil) or faxed to the attention of DESC-Q, (210) 925-8048.

- 3. PRODUCT DELIVERY HOURS: Routine deliveries shall arrive at the customer’s location between 0700 to 1000 hours, 1200 to 1500 hours, and 1600 to 2100 hours, Monday through Friday, excluding federal holidays. An occasional Saturday and Sunday delivery may be required.
- 4. PRODUCT DELIVERY LEAD-TIME: Product shall be delivered within forty-eight (48) hours after receipt of an order from the appointed Ordering Officer, unless a longer period of time is stated on the order.
- 5. PRODUCT ORDERS: The DESC Contracting Officer will issue blanket Delivery Orders (DD Form 1155) for obligation of funds for orders to be issued during that specific timeframe by the appointed Ordering Officer IAW Clause I211, ORDERING. The individual orders placed by the appointed Ordering Officer will designate the specific quantity to be delivered at the customer location specified in the contract.

6. SHIP PRODUCT TO:

Pratt & Whitney Rocketdyne (FL)  
 Attention: Area E Fuel Farm  
 17900 Beeline Highway  
 Jupiter, FL 33478

- 7. INSPECTION AND ACCEPTANCE: Inspection for quality shall be performed at origin. Quantity determination and acceptance shall be at destination.
- 8. METHOD OF MEASUREMENT: Certified scales are available on location and are available during normal and emergency receiving hours. Scales are government-owned. Metering is not an acceptable method of measurement.

9. DESCRIPTION OF CUSTOMER PROVIDED EQUIPMENT:

a. Description of Customer Provided LN<sub>2</sub> Tank Storage at Pratt & Whitney, FL.

(1) LN<sub>2</sub>

Owner / Tank No.	Location	Capacity (Gallons/Tons)	Working Pressure
NASA / N45	North Complex	14,000 gal / 66.70 tons	65 PSIA
NASA / N47	PSA*	5,000 gal / 16.87 tons	65 PSIA
P & W / N88	PSA*	20,000 gal / 67.46 tons	75 PSIA

(2) LOX

Owner / Tank No.	Location	Capacity (Gallons/Tons)	Working Pressure
NASA / O43	E Area	14,000 gal / 66.70 tons	55 PSIA
P & W / O89	PSA*	20,000 gal / 95.27 tons	75 PSIA

\* PSA – Propellant Storage Area

- 10. HOT FILLS: Occasionally the contractor may be required to perform a “Hot Fill” in order to cool-down and refill any tank that has gone empty and is warm.

- 11. SECURITY REQUIREMENTS: Delivery personnel must be a U.S. Citizen and have a valid commercial driver’s license.

13. DESCRIPTION OF INTERFACE BETWEEN CUSTOMER’S EXISTING LINES / EQUIPMENT AND SUPPLIER’S HANDLING EQUIPMENT:

LN<sub>2</sub> / LOX

Pratt & Whitney	Vendor*	Propellant
Roadable Dewar	Roadable Dewar	Storage
<u>Connection</u>	<u>Connection</u>	<u>Connection</u>

LOX	Fill/Drain	4" RH Male Futurecraft	3" Male CGA	4" RH Female Futurecraft
	Vent/Press	2" RH Male Futurecraft	Dumps to Ground	2" RH Female Futurecraft
	R/D	Dumps to Ground	Dumps to Ground	Dumps to Ground
LN <sub>2</sub>	Fill/Drain	4" LH Male Futurecraft	2 1/2 Male CGA	4" LH Female Futurecraft
	Vent/Press	2" LH Male Futurecraft	Dumps to Ground	2" LH Female Futurecraft
	R/D	Dumps to Ground	Dumps to Ground	Dumps to Ground

\*Adapters are available to mate to vendor Dewars.

Water and electrical power are available at all transfer stations. Electrical power at 110 and 440 volts is available. (For off-loading purposes only).

#### SECTION 4 - VANDENBERG AFB, CA

1. DESCRIPTION OF REQUIREMENT: The Defense Energy Support Center (DESC), Defense Logistics Agency, as the Department of Defense (DoD) Integrated Materiel Manager (IMM) for Aerospace Energy products and related services, requires production and delivery of Liquid Nitrogen (LN<sub>2</sub>), and Liquid Oxygen (LOX) in support of Vandenberg AFB, CA. The Contractor shall provide all production, raw materials, supplies, management, tools, equipment, labor and transportation necessary for the manufacture and delivery of LN<sub>2</sub> and LOX into customer owned tanks and trailers on an FOB Destination basis. The intended use of the LN<sub>2</sub> is in support of portable rechargers for pressurizing gaseous nitrogen pressure vessels and for cooling and purging. The intended use of the LOX is for manufacturing liquid breathing air for use in personal protective equipment, an oxidizing propellant in Atlas and Delta boosters, Centaur Propellant and as a LOX storage tank pressurant.

#### 2. PRODUCT SPECIFICATION AND TESTING REQUIREMENTS:

- a. LN<sub>2</sub> shall conform to the requirements of Type II, Grade B, IAW MIL-PRF-27401F dated 10 Jan 08, Propellant Pressurizing Agent, Nitrogen. Testing for particulate content is required.
- b. LOX shall conform to the requirements of Type II, Grade A, IAW MIL-PRF-25508G, dated 21 Nov 06, Propellant, Oxygen. Testing for particulate content is required.
- c. One copy of the Certificate of Analysis for each sample required by the specification shall accompany each shipment and one copy shall be sent to DESC-QT/QA within three days after the analysis of that sample. The analysis report shall be e-mailed to [tech.prop@dla.mil](mailto:tech.prop@dla.mil) or faxed to the attention of DESC-Q at (210) 925-8048.

#### 3. PRODUCT ORDERS:

The DESC Contracting Officer will issue blanket Delivery Orders (DD Form 1155) for obligation of funds for orders to be issued during that specific timeframe by the appointed Ordering Officer IAW Clause I211, ORDERING. The individual orders placed by the appointed Ordering Officer will designate the specific quantity to be delivered at the customer location specified in the contract.

#### 4. PRODUCT DELIVERY LEAD-TIME:

- a. Routine product deliveries shall be accomplished within forty-eight (48) hours after receipt of an order from the appointed Ordering Officer, unless a longer period of time is stated on the order.
- b. Emergency product deliveries shall be accomplished within twelve (12) hours after receipt of an order from the appointed Ordering Officer, 7 days a week, unless a longer period of time is stated on the order.

5. DELIVER PRODUCT TO:

SHIP TO: AEROSPACE MAINTENANCE AND OPERATIONS CENTER  
 UNITED PARADYNE CORP  
 BLDG. 7525  
 VANDENBERG AFB, CA 93437-5398

MARK FOR: DLA INVENTORY  
 ACTIVITY CODE: XUMU

6. PRODUCT DELIVERY HOURS:

Routine deliveries shall arrive at the customer's location between 0730 to 1300 hours, Monday through Friday.

7. PRODUCT DELIVERY REQUIREMENTS:

- a. The routine delivery time must be strictly adhered to as the launch facilities often have hazardous operations scheduled and cannot accommodate late or missed deliveries. Also, the supplier must be able to deliver multiple loads of each commodity for multiple days within the normal delivery time on the days requested.
- b. The Contractor shall provide a list of Contractor personnel available on a 24-hour per day basis regarding shipments. The list shall include full name, office telephone number, home telephone number, direct distance dialing number, fax number, and E-mail (if available) and this information should be kept updated.
- c. The Contractor shall notify the customer by telephone, E-mail or fax, four (4) hours prior to the shipment arrival at VAFB.

8. DESCRIPTION OF CUSTOMER OWNED TANKS AND TRAILERS:

a. Liquid Nitrogen:

<u>Location</u>	<u># of tanks</u>	<u>Tank Capacity - Gallons/Tons</u>	<u>MAWP*</u>
SLC-2	2	15,000 gal each/approx. 51 tons each	70 psig each
SLC-3 EAST	1	15,000 gal/approx. 51 tons	65 psig
SLC-3 EAST	1	6,000 gal/approx. 20 tons	250 psig

<u>Location</u>	<u># of trailers</u>	<u>Trailer Capacity – Gallons/Tons</u>	<u>MAWP</u>
Bldg. 1705	4	4,000 gal each/approx. 14 tons each	50 psig each

b. Liquid Oxygen:

<u>Location</u>	<u># of tanks</u>	<u>Tank Capacity – Gallons/Tons</u>	<u>MAWP</u>
SLC-2	1	28,000 gal/approx. 133 tons	90 psig
SLC-3 EAST	2	28,000 gal each/approx. 133 tons each	150 psig each
SLC-3 EAST	1	44,000 gal/approx. 210 tons	150 psig

<u>Location</u>	<u># of trailers</u>	<u>Trailer Capacity – Gallons/Tons</u>	<u>MAWP</u>
Bldg. 1705	2	4,000 gal each/approx. 19 tons each	50 psig each

\*Maximum Allowable Working Pressure

9. CONTRACTOR FURNISHED EQUIPMENT:

- a. Liquid Nitrogen: The Contractor shall provide a transfer hose fitting that will interface with a Futurecraft 550044 left-hand thread coupling system, installed on the tanks.
- b. Liquid Oxygen: The Contractor shall provide a transfer hose fitting that will interface with a Futurecraft 550043 right-hand thread coupling system, installed on the tanks.

10. INSPECTION AND ACCEPTANCE:

Inspection for quality shall be performed at origin. Quantity determination and acceptance shall be at destination.

11. METHOD OF MEASUREMENT:

Quantity determinations shall be made at the receiving activity using calibrated weight scales. The scales locations are:

- a. North Base: Bldg 11505  
Utah Avenue
- b. South Base: Bldg 969  
Mesa Road

12. HOT FILLS:

Occasionally, the Contractor may be required to perform a "Hot Fill" in order to cool-down and refill any tank that has gone empty and is warm.

13. SECURITY REQUIREMENTS:

For access to the premises:

- a. Contractor's driver shall have a valid driver's license.
- b. Driver shall provide a copy of the bill of lading at the Vandenberg AFB main gate.
- c. Escorts are required in controlled areas such as launch complexes.
- d. Safety briefings may be required at some facilities on Vandenberg AFB prior to granting access.

**SECTION 5 - ROBINS AFB, GA**

1. DESCRIPTION OF REQUIREMENT: The Defense Energy Support Center (DESC), Defense Logistics Agency, as the Department of Defense (DoD) Integrated Materiel Manager (IMM) for Aerospace Energy products and related services, requires production and delivery of Liquid Nitrogen (LN<sub>2</sub>) to Robins AFB, GA. The Contractor shall provide all production, materials, supplies, management, tools, equipment and labor necessary for the manufacture and delivery of LN<sub>2</sub> from the Contractor's facility. The LN<sub>2</sub> will be used for aircraft maintenance and manufacture of aircraft repair parts for C-17, C-5, C-130, F-15, and in laboratory analyses. All deliveries shall be FOB Destination into Government-owned tanks at Robins AFB, GA.

2. PRODUCT SPECIFICATION AND TESTING REQUIREMENTS:

- a. LN<sub>2</sub> shall conform to the requirements of TYPE II, Grade B of specification MIL-PRF-27401F, dated 10 Jan 2008, Propellant Pressurizing Agent, Nitrogen. The optional specification tests for argon, carbon dioxide, carbon monoxide and particulate content are not required.
- b. One copy of a certificate of analysis for each sample required by the specification shall accompany each shipment and one copy shall be sent to DESC-QT/QA within three days after the analysis of that sample. The analysis report shall be e-mailed to [tech.prop@dla.mil](mailto:tech.prop@dla.mil) or faxed to the attention of DESC-Q at (210) 925-8048.

3. PRODUCT ORDERS: The DESC Contracting Officer will issue blanket Delivery Orders (DD Form 1155) for obligation of funds for orders to be issued during that specific timeframe by the appointed Ordering Officer IAW Clause I211, ORDERING. The individual orders placed by the appointed Ordering Officer will designate the specific quantity to be delivered at the customer location specified in the contract.

4. PRODUCT DELIVERY LEAD-TIME: LN<sub>2</sub> product shall be delivered within one (1) working day after receiving an order from the appointed Ordering Officer, unless a longer period of time is stated on the order. The Customer is not able to allow a longer period of advance notification due to the frequency of changes in their requirements.

5. DELIVER PRODUCT TO:

775 Macon St.  
 Bldg. 1555  
 Robins AFB, GA 31098-2201

6. PRODUCT DELIVERY HOURS: Deliveries shall arrive at the Customer's location Tuesdays and Fridays between 0630-1530 hours, as scheduled, excluding federal holidays. If a scheduled delivery falls on a holiday, the delivery shall occur on the next working day following the holiday.

7. INSPECTION AND ACCEPTANCE: Inspection for quality shall be performed at origin. Quantity determination and acceptance shall be at destination.

8. METHOD OF MEASUREMENT: Quantity determinations shall be made at the receiving activity either by calibrated flow meter or weight using calibrated scales.

9. DESCRIPTION OF GOVERNMENT-OWNED TANKS: LN<sub>2</sub> storage tank location and capacities are as follows:

<u>Location</u>	<u>Number of Tanks</u>	<u>Maximum Storage Capacity (gallons/tons)</u>	<u>MAWP**</u>
Tank A; B-142	1	9,000 gallons (approx 30 tons)	250 psi
Tank B; B-137	1	11,000 gallons (approx 37 tons)	250 psi
Tank C; B-30	1	13,000 gallons (approx 44 tons)	170 psi
Tank D; B-165	1	500 gallons (approx 2 tons)	250 psi
Tank E; B-169	1	13,000 gallons (approx 44 tons)	250 psi
Tank F; B-640	1	3,000 gallons (approx 10 tons)	300 psi
Tank G; B-645	1	1,500 gallons (approx 5 tons)	300 psi
Tank H; B-670	1	3,000 gallons (approx 20 tons)	300 psi
Tank I; B-323	1	500 gallons (approx 2 tons)	200 psi

\*\*MAWP (Maximum Allowable Working Pressure)

Contractor shall provide any connectors/adaptors required to interface with the tanks.

10. HOT FILLS: Occasionally, the Contractor may be required to perform a "Hot Fill" in order to cool-down and refill any tank that has gone empty and is warm.

11. SECURITY REQUIREMENTS: For access to the premises, Contractor's driver shall proceed to Visitors Center and request escort to delivery location.

**PACKAGING AND HANDLING**

**D10 PACKAGING REQUIREMENTS (AEROSPACE ENERGY) (DESC APR 2006)**

(a) The Contractor shall be responsible for ensuring the hazardous materials shipment is in full compliance with all applicable packaging/packing, marking, labeling, placarding, blocking and bracing, and palletizing and shipping certifications in force and effect on the date of the shipment in accordance with the following applicable rules and regulations for the individual hazard, ultimate destination, and mode of transportation:

- (1) Title 49 of the Code of Federal Regulations (49 CFR) -- Packaging.
- (2) DLAI 4145.3, Preparing Hazardous Materials for Military Air Shipments.
- (3) International Air Transport Association (IATA) -- Dangerous Goods Regulations.
- (4) International Civil Aviation Organization (ICAO) -- Technical Instructions for the Safe Transportation of Dangerous Goods by Air.
- (5) International Maritime Organization (IMO) -- International Maritime Dangerous Goods (IMDG) Code (for overseas shipments by vessel).
- (6) MIL-STD 129, Standard Practice for Military Marking (for military destinations).
- (7) MIL-HDBK 774, Department of Defense Handbook, Palletized Unit Loads (for guidance only).
- (8) ASME MH 1.8, Wood Pallets.

- (b) Contractor commercial packaging (ASTM D 3951) shall also be in compliance with the requirements listed.  
(DESC 52.223-9F17)

**D15 CONTRACTOR SEAL REQUIREMENT (AEROSPACE ENERGY) (DESC OCT 2006)**

(a) The Contractor shall place tamper indicating devices (TIDs) such as a seal or cap on the shipping container(s) immediately after filling and sampling. The TIDs shall be placed on the containers in such a manner that pilferage or tampering of the product could only be accomplished by breaking or otherwise destroying the TID. This may require the application of several TIDs on each shipment container.

(b) Where possible, the TID shall be printed with a serial number. The container number and TID number(s) shall be recorded on the certificate of analysis and on the shipping documents. Monthly equipment inventory reports provided to DESC by the Contractor shall include container numbers as well as corresponding TID numbers.

(c) TIDs shall not be removed from a container unless authorized by DESC. If a TID is broken or no longer intact, the Contractor shall contact the Contracting Officer for further instructions. If the Contractor is instructed to place a new TID on the container, the new TID number (if applicable) shall be noted, along with the container number, as stated in paragraph (b) above.

(DESC 52.211-9FN1)

**INSPECTION AND ACCEPTANCE**

**E1.15 CONTRACTOR INSPECTION RESPONSIBILITIES (AEROSPACE ENERGY) (DESC APR 2006)**

**(a) QUALITY CONTROL PLAN.**

(1) The Contractor shall provide and maintain an inspection system and a written Quality Control Plan (QCP) acceptable to the Government. If the Contractor is ISO certified Q91 (ISO9001) Quality Management Systems, they have the option to offer their Q91 inspection system as their QCP provided their Q91 written plan incorporates all the QCP elements identified below. The QCP shall be established and reviewed for adequacy by the Quality Representative (QR) prior to commencement of production or services.

(2) The QCP shall include--

- (i) A schematic diagram of plant facilities pertinent to the inspection system indicating all inspection points;
- (ii) Sampling procedures.
- (iii) Sample testing methods/procedures;
- (iv) Analytical and measuring equipment calibration program;
- (v) Loading/shipping procedures;
- (vi) Records maintenance and reports preparation/distribution; and
- (vii) Corrective action procedures.

(b) The Contractor shall perform all inspection tests required by the specification/item description of the supplies to be furnished under this contract or shall have such tests performed in a laboratory acceptable to the Government. The Contractor shall notify the QR in sufficient time to permit inspection by the Government. When such tests are performed at origin on supplies to be accepted at destination, documentation that will enable verification of the original test results shall be provided to the Government at the time of acceptance.

(DESC 52.246-9FE2)

**E5 INSPECTION OF SUPPLIES - FIXED-PRICE (AUG 1996)**

(a) **DEFINITION. Supplies**, as used in this clause, includes but is not limited to raw materials, components, intermediate assemblies, end products, and lots of supplies.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering supplies under this contract and shall tender to the Government, for acceptance, only supplies that have been inspected in accordance with the inspection system and have been found by the Contractor to be in conformity with contract requirements. As part of the system, the Contractor shall prepare records evidencing all inspections made under the system and the outcome. These records shall be kept complete and made available to the Government during contract performance and for as long afterwards as the contract requires. The Government may perform reviews and evaluations as reasonably necessary to ascertain compliance with this paragraph. These reviews and evaluations shall be conducted in a manner that will not unduly delay the contract work. The right of review, whether exercised or not, does not relieve the Contractor of the obligations under the contract.

(c) The Government has the right to inspect and test all supplies called for by the contract, to the extent practicable, at all places and times, including the period of manufacture, and in any event before acceptance. The Government shall perform inspections and tests in a manner that will not unduly delay the work. The Government assumes no contractual obligation to perform any inspection and test for the benefit of the Contractor unless specifically set forth elsewhere in this contract.

(d) If the Government performs inspection or test on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties. Except as otherwise provided in the contract, the Government shall bear the expense of

Government inspections or tests made at other than the Contractor's or subcontractor's premises; PROVIDED, that in case of rejection, the Government shall not be liable for any reduction in the value of inspection or test samples.

(e) (1) When supplies are not ready at the time specified by the Contractor for inspection or test, the Contracting Officer may charge to the Contractor the additional cost of inspection or test.

(2) The Contracting Officer may also charge the Contractor for any additional cost of inspection or test when prior rejection makes reinspection or retest necessary.

(f) The Government has the right either to reject or to require correction of nonconforming supplies. Supplies are nonconforming when they are defective in material or workmanship or are otherwise not in conformity with contract requirements. The Government may reject nonconforming supplies with or without disposition instructions.

(g) The Contractor shall remove supplies rejected or required to be corrected. However, the Contracting Officer may require or permit correction in place, promptly after notice, by and at the expense of the Contractor. The Contractor shall not tender for acceptance corrected or rejected supplies without disclosing the former rejection or requirement for correction, and, when required, shall disclose the corrective action taken.

(h) If the Contractor fails to promptly remove, replace, or correct rejected supplies that are required to be removed or to be replaced or corrected, the Government may either (1) by contract or otherwise, remove, replace, or correct the supplies and charge the cost to the Contractor or (2) terminate the contract for default. Unless the Contractor corrects or replaces the supplies within the delivery schedule, the Contracting Officer may require their delivery and make an equitable price reduction. Failure to agree to a price reduction shall be a dispute.

(i) (1) If this contract provides for the performance of Government quality assurance at source, and if requested by the Government, the Contractor shall furnish advance notification of the time (i) when Contractor inspection or tests will be performed in accordance with the terms and conditions of the contract and (ii) when the supplies will be ready for Government inspection.

(2) The Government's request shall specify the period and method of the advance notification and the Government representative to whom it shall be furnished. Requests shall not require more than 2 workdays of advance notification if the Government representative is in residence in the Contractor's plant, nor more than 7 workdays in other instances.

(j) The Government shall accept or reject supplies as promptly as practicable after delivery, unless otherwise provided in the contract. Government failure to inspect and accept or reject the supplies shall not relieve the Contractor from responsibility, nor impose liability on the Government, for nonconforming supplies.

(k) Inspections and tests by the Government do not relieve the Contractor of responsibility for defects or other failures to meet contract requirements discovered before acceptance. Acceptance shall be conclusive, except for latent defects, fraud, gross mistakes amounting to fraud, or as otherwise provided in the contract.

(l) If acceptance is not conclusive for any of the reasons in paragraph (k) hereof, the Government, in addition to any other rights and remedies provided by law, or under other provisions of this contract, shall have the right to require the Contractor (1) at no increase in contract price, to correct or replace the defective or nonconforming supplies at the original point of delivery or at the Contractor's plant at the Contracting Officer's election, and in accordance with a reasonable delivery schedule as may be agreed upon between the Contractor and the Contracting Officer; PROVIDED, that the Contracting Officer may require a reduction in contract price if the Contractor fails to meet such delivery schedule, or (2) within a reasonable time after receipt by the Contractor of notice of defects or nonconformance, to repay such portion of the contract as is equitable under the circumstances if the Contracting Officer elects not to require correction or replacement. When supplies are returned to the Contractor, the Contractor shall bear the transportation cost from the original point of delivery to the Contractor's plant and return to the original point when that point is not the Contractor's plant. If the Contractor fails to perform or act as required in (1) or (2) above and does not cure such failure within a period of 10 days (or such longer period as the Contracting Officer may authorize in writing) after receipt of notice from the Contracting Officer specifying such failure, the Government shall have the right by contract or otherwise to replace or correct such supplies and charge to the Contractor the cost occasioned the Government thereby.

(FAR 52.246-2)

## **E6 CERTIFICATE OF CONFORMANCE (DESC JAN 2004)**

(a) When authorized in writing by the cognizant Contract Administration Office (CAO), the Contractor shall ship with a Certificate of Conformance any supplies for which the contract would otherwise require inspection at source. In no case shall the Government's right to inspect supplies under the inspection provisions of this contract be prejudiced. Shipments of such supplies will not be made under this contract until use of the Certificate of Conformance has been authorized in writing by the CAO, or inspection and acceptance have occurred.

(b) The Contractor's signed certificate shall be attached to or included on the top copy of the Material Inspection and Receiving Report (DD Form 250) or other authorized document that is distributed to the payment office (Block 12 of the DD Form 250). A copy shall also be sent with the shipment and to the CAO (Block 10 of the DD Form 250); however, the CAO copy shall only be sent if specifically requested by the Contracting Officer.

(c) The Government has the right to reject defective supplies or services within a reasonable time after delivery by written notification to the Contractor. The Contractor shall in such event promptly replace, correct, or repair the rejected supplies or services at the Contractor's expense.

(d) The certificate shall read as follows:

"I certify that on \_\_\_\_\_ [insert date], the \_\_\_\_\_ [insert Contractor's name] furnished the supplies or services called for by Contract No. \_\_\_\_\_ via \_\_\_\_\_ [Carrier] on \_\_\_\_\_ [identify the bill of lading or shipping document] in accordance with all applicable requirements. I further certify that the supplies or services are of the quality specified and conform in all respects with the contract requirements, including specifications, drawings, preservation, packaging, packing, marking requirements, and physical item identification (part number), and are in the quantity shown on this or on the attached acceptance document."

Date of Execution: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

(DESC 52.246-9F01)

**E22.01 QUALITY REPRESENTATIVE (DESC JUL 1992)**

The Quality Office assigned inspection responsibility under this contract is

**TO BE DETERMINED AT TIME OF AWARD**

(DESC 52.246-9F35)

**E33.07 MANUFACTURING AND FILLING POINTS (DESC MAR 2006)**

The name, complete addresses and telephone number of the manufacturing and filling points for each product to be furnished hereunder are as follows:

<u>PRODUCT</u>	<u>NAME, COMPLETE ADDRESS AND TELEPHONE NUMBER OF MANUFACTURING POINT/FILLING POINT</u>
LIQUID OXYGEN, TYPE II, GRADE "A" IAW MIL-PRF-25508G, DATED 21 Nov 06, NSN: 9135-00-965-2527	_____ _____ _____
LIQUID NITROGEN, TYPE II, GRADE "B" IAW MIL-PRF-27401F, DATED 10 Jan 08 NSN: 9135-00-965-2526,	_____ _____ _____

**\*NOTE – PLEASE ADDRESS ALL LOCATIONS THAT ARE QUOTED, UTILIZING AN ATTACHMENT IF NEEDED.**

(DESC 52.246-9F50)

**E35 NONCONFORMING SUPPLIES AND SERVICES (DESC JAN 2004)**

- (a) The Government may, at it's discretion, accept nonconforming supplies or services. In such cases, the Contractor must obtain a deviation or waiver from the Contracting Officer prior to acceptance.
- (b) The following procedures shall be used to request a deviation or waiver to the applicable nonconformance(s). A deviation is a request by a Contractor to deviate from the contract requirements after contract award, but prior to initial production of each product (for the duration of the contract). A waiver is a request by a Contractor to deviate from the contract requirements after initial production or each product (on a case-by-case basis or for a set period).

(1) Requests for deviations and waivers shall be submitted by the Contractor to the Contracting Officer with a copy to the Quality Representative (QR). Each request shall provide the following information: Contractor name; contract number; contract line item and product, if applicable; clause number, paragraph and subparagraph, as appropriate; the nature of the request; the reason for the request; the corrective action being taken by the Contractor to correct and prevent recurrence of

the condition(s) causing the nonconformance; and equitable price adjustment offered over the administrative fee. In extraordinary situations, the Contractor may initially submit the request for a waiver, not a deviation, through the cognizant QR to the Contracting Officer or the Contracting Officer's Representative (COR) in the Quality Operations Division (DESC-BQ) of the Defense Energy Support Center (DESC). Extraordinary situation requests shall be submitted formally to the Contracting Officer prior to close of business of the next normal DESC workday (0800 to 1630 hours EST, Monday through Friday, Federal Holidays excluded). As used in this clause, the term extraordinary situation means the matter cannot await resolution until the next normal DESC workday. In addition, if either the Contracting Officer or the COR cannot be reached, the Duty Officer shall be contacted and provided the necessary information to forward to the proper individuals as soon as possible. The Duty Officer's telephone number is **(800) 286-7633** or **(703) 767-8420; (DSN) 427-8420**.

(2) If a deviation or waiver is granted, the contract will be modified to provide an equitable price reduction or other adequate consideration commensurate with the deviation or waiver being granted. If the situation dictates, a deviation or waiver may be granted without prior agreement on price adjustment or other consideration subject to agreement by the Contractor, or its representative, to subsequent negotiation. Such agreement shall be documented on the receiving document or other appropriate correspondence. After negotiations, failure to agree on adequate consideration shall be a dispute concerning a question of fact within the meaning of the Disputes paragraph of the CONTRACT TERMS AND CONDITIONS – COMMERCIAL ITEMS clause of this contract.

(3) If a deviation or waiver is granted and the nonconforming supplies are accepted, then in no event will consideration be less than \$250 to cover administrative costs, plus any additional cost of Government reinspection or retest, if necessary.

(4) If a deviation or waiver is granted modifying this contract but the supplies accepted are subsequently determined to be in conformity with contract specifications, the Contractor shall still be obligated to pay the consideration originally agreed upon in support of the deviation or waiver. If, however, this consideration exceeds \$500, a second contract modification shall be issued reducing the Contractor's obligation to \$500 (the administrative cost of issuing the two required modifications).

(c) When notification of nonconforming supplies is received after the supplies have been accepted, and the Government determines not to exercise its right to reject or to require correction under the INSPECTION OF SUPPLIES – FIXED-PRICE, INSPECTION AND ACCEPTANCE OF SUPPLIES (SHIPS' BUNKERS), or CONTRACT TERMS AND CONDITIONS – COMMERCIAL ITEMS clause, then in no event will consideration be less than \$250 to cover administrative costs. This \$250 fee is in addition to—

- (1) Consideration commensurate with the extent of nonconforming supplies; and
- (2) Cost of Government reinspection or retest, if necessary.

The administrative fee will apply to each claim letter issued for off-specification product delivered to an activity.

(d) Contractors shall be held responsible for payment of any fines or penalties imposed on a receiving activity by an environmental enforcement agency, resulting from the delivery of nonconforming supplies under a DESC contract.

(e) Repeated tender of nonconforming supplies or services, including those with only minor defects, will be discouraged by appropriate actions, including, but not limited to rejecting the supplies or services whenever feasible and documenting the Contractor's performance records.

(DESC 52.246-9FQ5)

## **DELIVERIES OR PERFORMANCE**

### **F1.36 DETERMINATION OF QUANTITY (PROPELLANTS, CRYOGENICS AND GASES) (AEROSPACE ENERGY) (DESC APR 2006)**

(a) **QUANTITY.** The quantity of supplies furnished under this contract shall be determined according to one of the following methods:

(1) **DELIVERIES INTO OR BY PIPELINE.**

(i) **F.O.B. ORIGIN.**

(A) On items requiring delivery at the Contractor's terminal or plant, the quantity shall be determined by a calibrated flow meter.

(B) The **Government** retains the right to have a representative witness quantity measurements performed by the Contractor.

(ii) **F.O.B. DESTINATION.**

(A) At the Government's option, quantity determinations will be made at the receiving activity on the basis of a calibrated flow meter.

(B) The **Contractor** has the right to have a representative witness quantity measurements performed by the Government.

(C) If the Government does not opt to perform quantity determinations at the destination (see schedule), the Contractor shall determine quantity on the basis of a calibrated flow meter.

(D) The **Government** retains the right to have a representative witness quantity measurements performed by the Contractor.

(2) **DELIVERIES BY OTHER THAN PIPELINE.**

(i) **F.O.B. ORIGIN.**

(A) On items requiring delivery at the Contractor's terminal or plant, the quantity shall be determined (at the Contractor's option) on the basis of--

- (a) Calibrated flow meter.
- (b) Weight using calibrated scales.
- (c) Pressure Temperature Fill Charts/Calculations (for gaseous cylinders and tube trailers).

(B) The **Government** retains the right to have a representative witness quantity measurements performed by the Contractor.

(ii) **F.O.B. DESTINATION.**

(A) At the Government's option, quantity determinations will be made at the receiving activity on the basis of--

- (a) Calibrated flow meter.
- (b) Weight using calibrated scales.
- (c) Pressure Temperature Fill Charts/Calculations (for gaseous cylinders and tube trailers).

(B) The **Contractor** has the right to have a representative witness quantity measurements performed by the Government.

(C) If the Government does not opt to perform quantity determinations at the destination (see Schedule), the Contractor shall determine quantity on the basis of--

- (a) Calibrated flow meter.
- (b) Weight using calibrated scales.
- (c) Pressure Temperature Fill Charts/Calculations (for gaseous cylinders and tube trailers).

(D) The **Government** retains the right to have a representative witness quantity measurements performed by the Contractor.

(b) **MEASUREMENT STANDARDS.** Weight scales used in determining net shipping volumes shall be certified as calibrated within the frequency required by local regulation. If no local regulation exists, the frequency of calibration shall be conducted in accordance with weight scale manufacturer recommendation or every six months, whichever is more frequent. All flow meters used in determining product volume shall be calibrated within the frequency required by local regulation (foreign or domestic). If no local regulation exists, then the frequency of calibration shall be that recommended by the meter manufacturer or every six months, whichever is more frequent. Pressure gauges and thermometers used to calculate fill quantities for gaseous cylinders and tube trailers shall be calibrated at least every six months. The net quantity shipped shall be reported on the DD Form 250 or commercial equivalent, whichever is applicable.

(DESC 52.211-9FB6)

**F3.04 TRANSPORTATION OF HAZARDOUS MATERIALS (AEROSPACE ENERGY) (DESC APR 2006)**

The Contractor shall be responsible for ensuring the transportation of hazardous materials is in full compliance with all applicable rules and regulations below that are in force and effect on the date of the shipment for the individual hazard, ultimate destination, and mode of transportation:

- (a) Title 49 of the Code of Federal Regulations (49 CFR) -- Transportation.
- (b) DLAI 4145.3, Preparing Hazardous Materials for Military Air Shipments.
- (c) International Air Transport Association (IATA) -- Dangerous Goods Regulations.
- (d) International Civil Aviation Organization (ICAO) -- Technical Instructions for the Safe Transportation of Dangerous

Goods by Air.

(e) International Maritime Organization (IMO) -- International Maritime Dangerous Goods (IMDG) Code (for overseas shipments by vessel).

(DESC 52.247-9FJ6)

**F3.10 TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (F.O.B. DESTINATION) (AEROSPACE ENERGY) (DESC DEC 2007)**

(a) The Contractor shall be paid for detention beyond free time for delays caused by the Government. Free time will commence at the time the Contractor's transport truck or truck and trailer arrives at the delivery destination (receiving tank identified in the contract) and will end when the carrier is released. For items involving multiple drops, time between drops will not be included in the free time. The attached Form H-14, Transport Equipment Delay Certificate, shall be completed to show the date and time the carrier arrived and departed and the reason(s) for the delays. This form must be signed by both the driver and unloading personnel. A signed copy of this form must be sent to--

ATTN: DESC-MIC (INVOICE MONITOR)

1014 BILLY MITCHELL BLVD  
SAN ANTONIO, TX 78226

(b) A minimum of two hours time is required by the Government. If Contractor free time is beyond two hours, indicate here: \_\_\_\_\_.

(c) The rate for detention shall be comparable to regulated tariffs governing the local area of the receiving activity. The rate for detention shall be stated by quarter hour.

(d) The above will not be considered in the evaluation of offers for award, except that free time of less than two hours or detention rates not comparable to regulated tariffs may render an offer unacceptable/bid nonresponsive.

(e) **Detention Costs:** Invoices for detention costs will be forwarded directly to the address stated above.

(DESC 52.247-9FK3)

## **F21 CONTRACTOR NOTICE REGARDING LATE DELIVERY (DESC APR 1968)**

In the event the Contractor encounters difficulty in meeting performance requirements, or when it anticipates difficulty in complying with the contract delivery Schedule or date, it shall immediately notify the Contracting Officer, in writing, giving pertinent details; PROVIDED, however, that this data shall be informational only in character and that this provision shall not be construed as a waiver by the Government of any delivery Schedule or date or of any rights or remedies provided by law or under this contract.

(DESC 52.242-9FM1)

## **CONTRACT ADMINISTRATION DATA**

### **G3.01 PAYMENT DUE DATE (DESC OCT 1988)**

When payment due date falls on a Saturday or Sunday, or on a United States Official Federal holiday, payment will be due and payable on the following workday.

(DESC 52.232-9F45)

### **G152 SUBMISSION OF INVOICES FOR PAYMENT (AEROSPACE ENERGY) (DESC DEC 2007)**

(a) Supporting documentation required for processing payment to the Contractor after delivery of product shall be the original of the DD Form 250, Material Inspection and Receiving Report, or an original of its commercial equivalent. If required by the Schedule, a copy of the certified weight ticket shall accompany each shipment.

(1) **FOR F.O.B. ORIGIN DELIVERIES.** The original DD Form 250 or commercial equivalent shall have been certified by the Government's Quality Assurance Representative (QAR) and have the QAR's typed name, title, mailing address and office phone number included on the document.

(2) **FOR F.O.B. DESTINATION DELIVERIES.** The original DD Form 250 or commercial equivalent shall be provided to the customer/Defense Fuel Support Point (DFSP) to verify receipt of the product at the time of delivery who shall provide the original DD Form 250 or commercial equivalent to a Government representative to certify acceptance of the delivery. For f.o.b. destination deliveries that require f.o.b. origin inspection, the DD Form 250 shall have both the origin QAR's and the customer's/DFSP's signatures.

(3) **FOR C.O.C. DELIVERIES.** The original DD Form 250 or commercial equivalent shall be certified by the Contractor, in accordance with the applicable contract clause, verifying delivery in accordance with contract terms and conditions and the Schedule.

(b) The Contractor shall directly fax the original product invoice along with the original DD Form 250 or commercial equivalent, as described above, within 15 calendar days of delivery, into the Electronic Document Management system at **866-313-2340** or **(614) 693-2630**.

(c) In addition, the Contractor shall concurrently mail a copy of the signed DD Form 250 or commercial equivalent and, if required by the Schedule, a copy of the certified weight ticket to—

DESC-MIC (INVOICE MONITOR)  
1014 BILLY MITCHELL BLVD  
SAN ANTONIO, TX 78226

FAX: 210-925-8048, ATTN: DESC-MIC (Invoice Monitor)

(d) If the contract involves services such as lease of Contractor-furnished equipment, services of any nature, and/or additional service charges otherwise allowed by the Schedule, such as Delay and Standby, the Contractor shall submit a separate service original invoice to the DESC-MIC Invoice Monitor at the address shown in paragraph (c) above. Unless stipulated otherwise in the contract, all invoices for service will be submitted after the services have been performed. In the case of leased containers, the invoice shall also include

the container serial number or other unique identifier as well as information relative to the product that the container supports, i.e., name of the product, NSN, etc.

(DESC 52.232-9FF2)

## **PART II – CONTRACT CLAUSES**

### **I1.03-1 CONTRACT TERMS AND CONDITIONS - COMMERCIAL ITEMS (FEB 2007) IBR**

#### **ADDENDUM to I1.03-1 (FAR Clause 52.212-4)**

### **I1.20-1 CLAUSES AND PROVISIONS INCORPORATED BY REFERENCE (DESC JAN 2003)**

(a) This clause incorporates contract clauses and solicitation provisions by reference with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

(b) The full text of any FAR, DFARS, or DLAD solicitation clause or provision may be accessed electronically at these addresses:

**FAR/DFARS:** <http://farsite.hill.af.mil>  
**DLAD:** <http://www.dla.mil/i-3/j-336>

(c) **All DESC clauses and provisions are contained in full text in this document.**

(d) **Solicitation Provisions Only.** The offeror is cautioned that the solicitation provisions listed in (e)(1) below may include blocks that must be completed by the offeror and submitted with its quotation or offer. As long as the offeror identifies the solicitation provision by number, the offeror may simply complete those paragraphs requiring fill-in information to submit with its quotation or offer. In addition to the solicitation provisions listed in (e)(1) below, the contract clauses listed in (e)(2) below shall apply to any resultant contract but do not require the submission of additional offer information.

(e) The following FAR/DFARS/DLAD contract clauses and solicitation provisions are hereby incorporated by reference in addition to those listed in the CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUES OR

EXECUTIVE ORDERS - COMMERCIAL ITEMS and the CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS clauses:

(1) <u>SOLICITATION PROVISION NUMBER</u>	<u>REGULATORY NUMBER</u>	<u>PROVISION TITLE</u>
L2.11-2	FAR 52.215-5	<b>FACSIMILE PROPOSALS (OCT 1997)</b> (c) (210) 925-9758
L5.01-1	DLAD 52.233-9000	<b>AGENCY PROTESTS (APR 2006) – DLAD</b>
L 74	FAR 52.216-1	<b>TYPE OF CONTRACT (APR 1984)</b> <u>Firm Fixed-Price Requirements-Type Contract</u>
(2) <u>CONTRACT CLAUSE NUMBER</u>	<u>REGULATORY NUMBER</u>	<u>CLAUSE TITLE</u>
E5	FAR 52.246-2	<b>INSPECTION OF SUPPLIES - FIXED-PRICE (AUG 1996)</b>
E5.03	FAR 52.246-4	<b>INSPECTION OF SERVICES – FIXED PRICE (AUG 1996)</b>
F18	FAR 52.247-34	<b>F.O.B. DESTINATION (NOV 1991)</b>
F105	FAR 52.211-16	<b>VARIATION IN QUANTITY (APR 1984)</b> (b) <u>10% Percent increase</u> <u>10% Percent decrease</u>

This increase or decrease shall apply to Product CLINs 0001 – 0012.

<b>F108</b>	<b>FAR 52.211-7</b>	<b>DELIVERY OF EXCESS QUANTITIES (SEP 1989)</b>
<b>I1.07</b>	<b>FAR 252.204-7004</b>	<b>CENTRAL CONTRACTOR REGISTRATION (ALTERNATE A) (JUL 2006/SEP 2007)</b>
<b>I11.04</b>	<b>FAR 52.242-13</b>	<b>BANKRUPTCY (JUL 1995)</b>
<b>I14.04</b>	<b>DFARS 252.225-7002</b>	<b>QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS (APR 2003)</b>
<b>I25</b>	<b>FAR 52.227-1</b>	<b>AUTHORIZATION AND CONSENT (DEC 2007)</b>
<b>I28.26</b>	<b>DFARS 252.225-7013</b>	<b>DUTY-FREE ENTRY (OCT 2006)</b>
<b>I84</b>	<b>FAR 52.216-21</b>	<b>REQUIREMENTS (OCT 1995)</b> (f) 60 days after expiration of the ordering period.
<b>I198</b>	<b>DFARS 252.243-7001</b>	<b>PRICING OF CONTRACT MODIFICATIONS (DEC 1991)</b>
<b>I211</b>	<b>FAR 52-216-18</b>	<b>ORDERING (OCT 1995)</b> (b) <u>From: Date of Award To: 01 Oct 2013.</u>
<b>I287</b>	<b>FAR 52.204-9</b>	<b>PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (SEP 2007)</b>
<b>I410</b>	<b>DFARS 252.232-7010</b>	<b>LEVIES ON CONTRACT PAYMENTS (DESC 2006)</b>

(DESC 52.252-9F08)

**I11.01-2 ADMINISTRATIVE COST OF TERMINATION FOR CAUSE – COMMERCIAL ITEMS (DESC FEB 1996)**

(a) In the event this contract is terminated for cause, in whole or in part, the Government will incur administrative costs.

(b) The Contractor agrees to pay all administrative costs associated with a contract termination action. The minimum amount the Contractor shall pay for each termination action is \$500. This payment for administrative costs is in addition to any excess procurement costs and any other remedies or damages resulting from the termination.

(c) The term **termination action**, as used herein, means the termination for cause, including any associated procurement effort, involving--

- (1) Any single order or any group of orders terminated together;
- (2) Any item or group of items terminated together; or
- (3) The entire contract.

(DESC 52.249-9F20)

**I190.06 MATERIAL SAFETY DATA SHEETS -- COMMERCIAL ITEMS (DESC MAR 2000)**

(a) The Contractor agrees to submit to the Contracting Officer, upon request, a Material Safety Data Sheet (MSDS) that meets the requirements of 29 CFR 1910.1200(g) and the latest revision of Federal Standard No. 313 for all requested contract items. MSDSs must cite the contract number, the applicable CAGE code of the manufacturer, and, where so identified, the National Stock Number (NSN).

(b) The data on the MSDSs must be current and complete, reflecting the final composition of the product supplied. Should the description /composition of the product change in any manner from a previously submitted MSDS, the Contractor shall promptly provide a new MSDS to the Contracting Officer.

(DESC 52.223-9F06)

**I209.09 EXTENSION PROVISIONS (DESC APR 2003)**

(a) The DESC Contracting Officer reserves the right to unilaterally extend this contract on the same terms and conditions one or more times for a total of no more than six months. Notice of contract extension will be furnished to the Contractor 30 days prior to expiration of this contract or any extension thereof. However, nothing in this clause precludes the Contractor from agreeing to an extension of the contract if the DESC Contracting Officer fails to issue the notice within the 30 day time frame.

(b) The foregoing extension may be exercised by the DESC Contracting Officer where continued performance is required until a follow-on contract is awarded or, in the event a follow-on contract has been awarded, until a succeeding Contractor is positioned to commence performance.

(c) Extension of this contract shall be considered to have been accomplished at the time the DESC Contracting Officer provides written notification to the Contractor by facsimile or by mail.

(DESC 52.217-9F20)

**II.04 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS – COMMERCIAL ITEMS (JAN 2009)**

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clause, which is incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(2) 52.233-4, Applicable Law for Breach of Contract Claim (Oct 2004) (Pub. L. 108-77, 108-78).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

**[Contracting Officer shall check as appropriate.]**

(1) 52.203-6, Restrictions on Subcontractor Sales to the Government (Sep 2006), with Alternate I (Oct 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

(2) 52.203-13, Contractor Code of Business Ethics and Conduct (Dec 2008) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(3) 52.219-3, Notice of Total HUBZone Set-Aside (Jan 1999) (15 U.S.C. 657a).

(4) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jul 2005) (if the offeror elects to waive the preference, it shall so indicate in its offer.) (15 U.S.C. 657a).

(5) [RESERVED]

(6) (i) 52.219-6, Notice of Total Small Business Set-Aside (Jun 2003) (15 U.S.C. 644).

(ii) Alternate I (Oct 1995) of 52.219-6.

(iii) Alternate II (Mar 2004) of 52.219-6.

(7) (i) 52.219-7, Notice of Partial Small Business Set-Aside (Jun 2003) (15 U.S.C. 644).

(ii) Alternate I (Oct 1995) of 52.219-7.

(iii) Alternate II (Mar 2004) of 52.219-7.

(8) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)).

(9) (i) 52.219-9, Small Business Subcontracting Plan (Apr 2008) (15 U.S.C. 637(d)(4)).

(ii) Alternate I (Oct 2001) of 52.219-9.

(iii) Alternate II (Oct 2001) of 52.219-9.

(10) 52.219-14, Limitations on Subcontracting (Dec 1996) (15 U.S.C. 637(a)(14)).

(11) 52.219-16, Liquidated Damages – Subcontracting Plan (Jan 1999) (15 U.S.C. 637(d)(4)(F)(i)).

(12) (i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (Oct 2008) (10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).

(ii) Alternate I (Jun 2003) of 52.219-23.

- (13) 52.219-25, Small Disadvantaged Business Participation Program – Disadvantaged Status and Reporting (Apr 2008) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (14) 52.219-26, Small Disadvantaged Business Participation Program – Incentive Subcontracting (Oct 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (15) 52.219-27, Notice of Total Service-Disabled Veteran-Owned Small Business Set-Aside (May 2004).
- (16) 52.219-28, Post Award Small Business Program Rerepresentation (June 2007) (15 U.S.C. 632(a)(2)).
- (17) 52.222-3, Convict Labor (Jun 2003) (E.O. 11755).
- (18) 52.222-19, Child Labor – Cooperation with Authorities and Remedies (Feb 2008) (E.O. 13126).
- (19) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- (20) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).
- (21) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sep 2006) (38 U.S.C. 4212).
- (22) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).
- (23) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sep 2006) (38 U.S.C. 4212).
- (24) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).
- (25) (i) 52.222-50, Combating Trafficking in Persons (Aug 2007) (Applies to all contracts).  
 (ii) Alternate I (Aug 2007) of 52.222-50.
- (26) (i) 52.222-54, Employment Eligibility Verification (Jan 2009) (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)  
 (ii) Alternate I (Aug 2007) of 52.222-50.
- (27) (i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Items (May 2008) (42 U.S.C. 6962(c)(3)(A)(ii)).  
 (ii) Alternate I (May 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)).
- (28) 52.223-15, Energy Efficiency in Energy-Consuming Products (Dec 2007) (42 U.S.C. 8259b).
- (29) 52.223-16, IEEE 1680 Standard for the Government Assessment of Personal Computer Products (Dec 2007) (E.O. 13423).  
 (ii) Alternate I (Dec 2007) of 52.223-16.
- (30) 52.225-1, Buy American Act – Supplies (Jun 2003) (41 U.S.C. 10a-10d).
- (31) (i) 52.225-3, Buy American Act – Free Trade Agreements – Israeli Trade Act (Jun 2006) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, Pub. L. 108-77, 108-78, 108-286, and 109-53).  
 (ii) Alternate I (Jan 2004) of 52.225-3.  
 (iii) Alternate II (Jan 2004) of 52.225-3.
- (32) 52.225-5, Trade Agreements (Aug 2007) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).
- (33) 52.225-13, Restriction on Certain Foreign Purchases (Jun 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
- (34) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (Nov 2007) (42 U.S.C. 5150).

- (35) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) (42 U.S.C. 5150).
- (36) 52.232-29, Terms for Financing of Purchases of Commercial Items (Feb 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).
- (37) 52.232-30, Installment Payments for Commercial Items (Oct 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).
- (38) 52.232-33, Payment by Electronic Funds Transfer – Central Contractor Registration (Oct 2003) (31 U.S.C. 3332).
- (39) 52.232-34, Payment by Electronic Funds Transfer – Other Than Central Contractor Registration (May 1999) (31 U.S.C. 3332).
- (40) 52.232-36, Payment by Third Party (May 1999) (31 U.S.C. 3332).
- (41) 52.239-1, Privacy or Security Safeguards (Aug 1996) (5 U.S.C. 552a).
- (42) (i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631).
- (ii) Alternate I (Apr 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items:

**[Contracting Officer shall check as appropriate.]**

- (1) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et seq.).
- (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- (3) 52.222-43, Fair Labor Standards Act and Service Contract Act – Price Adjustment (Multiple Year and Option Contracts) (Nov 2006) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- (4) 52.222-44, Fair Labor Standards Act and Service Contract Act – Price Adjustment (Feb 2002) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).
- (5) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment – Requirements (Nov 2007) (41 U.S.C. 351, et seq.).
- (6) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services – Requirements (Nov 2007) (41 U.S.C. 351, et seq.).
- (7) 52.237-11, Accepting and Dispensing of \$1 Coin (Sep 2008) (31 U.S.C. 5112(p)(1)).

(d) **COMPTROLLER GENERAL EXAMINATION OF RECORD.** The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, AUDIT AND RECORDS -- NEGOTIATION.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the DISPUTES clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) (1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (i) through (vii) of this paragraph, in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (Dec 2008) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(ii) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$550,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).

(iv) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans, (Sep 2006) (38 U.S.C. 4212).

(v) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).

(vi) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).

(vii) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et. seq.).

(viii) 52.222-50, Combating Trafficking in Persons (Aug 2007) (22 U.S.C. 7104(g)). Flow down required in accordance with paragraph (f) of FAR clause 52.222-50.

(ix) 52.222-54, Employment Eligibility Verification (Jan 2009).

(x) 52.225-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment – Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

(xi) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services – Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

(xii) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the Contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(FAR 52.212-5)

## **11.05 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (SEP 2008)**

(a) The Contractor agrees to comply with the following Federal Acquisition Regulation (FAR) clause which, if checked, is included in this contract by reference to implement a provision of law applicable to acquisitions of commercial items or components.

52.203-3, Gratuities (APR 1984) (10 U.S.C. 2207).

(b) The Contractor agrees to comply with any clause that is checked on the following list of Defense FAR Supplement clauses which, if checked, is included in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components.

(1) 252.205-7000, Provision of Information to Cooperative Agreement Holders (DEC 1991) (10 U.S.C. 2416).

(2) 252.219-7003, Small Business Subcontracting Plan (DoD Contracts) (APR 2007) (15 U.S.C. 637).

(3) 252.219-7004, Small Business Subcontracting Plan (Test Program) (AUG 2008) (15 U.S.C. 637 note).

(4) 252.225-7001, Buy American Act and Balance of Payments Program (JUN 2005) (41 U.S.C. 10a-10d, E.O. 10582).

(5) 252.225-7012, Preference for Certain Domestic Commodities (MAR 2008) (10 U.S.C. 2533a).

(6) 252.225-7014, Preference for Domestic Specialty Metals (JUN 2005) (10 U.S.C. 2533a).

(7) 252.225-7015, Restriction on Acquisition of Hand or Measuring Tools (JUN 2005) (10 U.S.C. 2533a).

(8) 252.225-7016, Restriction on Acquisition of Ball and Roller Bearings (MAR 2006); (Section 8065 of Public Law 107-117 and the same restriction in subsequent DoD appropriations acts).

- (9) 252.225-7021, Trade Agreements (MAR 2007) (19 U.S.C. 2501-2518 and 19 U.S.C. 3301 note).
- (10) 252.225-7027, Restriction on Contingent Fees for Foreign Military Sales (APR 2003) (22 U.S.C. 2779).
- (11) 252.225-7028, Exclusionary Policies and Practices of Foreign Governments (APR 2003) (22 U.S.C. 2755).
- (12) (i) 252.225-7036, Buy American Act – Free Trade Agreements – Balance of Payments Program (MAR 2007) 41 U.S.C. 10a-10d and 19 U.S.C. 3301 note).
  - (ii) Alternate I (OCT 2006) of 252.225-7036.
- (13) 252.225-7038, Restriction on Acquisition of Air Circuit Breakers (JUN 2005) (10 U.S.C. 2534(a)(3)).
- (14) 252.226-7001, Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (SEP 2004) (Section 8021 of Pub. L. 107-248) and similar sections in subsequent DoD appropriations acts).
- (15) 252.227-7015, Technical Data – Commercial Items (NOV 1995) (10 U.S.C. 2320).
- (16) 252.227-7037, Validation of Restrictive Markings on Technical Data (SEP 1999) (10 U.S.C. 2321).
- (17) 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports (MAR 2008) (10 U.S.C. 2227).
- (18) 252.237-7019, Training for Contractor Personnel Interacting with Detainees (SEP 2006) (Section 1092 of Public Law 108-375).
- (19) 252.243-7002, Requests for Equitable Adjustment (MAR 1998) (10 U.S.C. 2410).
- (20) (i) 252.247-7023, Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631).
  - (ii) Alternate I (MAR 2000) of 252.247-7023.
  - (iii) Alternate II (MAR 2000) of 252.247-7023.
  - (iv) Alternate III (MAY 2002) of 252.247-7023.
- (21) 252.247-7024, Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).

(c) In addition to the clauses listed in paragraph (e) of the CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS – COMMERCIAL ITEMS clause of this contract (FAR 52.212-5), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

- (1) 252.225-7014, Preference for Domestic Specialty Metals, Alternate I (APR 2003) (10 U.S.C. 2533a).
- (2) 252.237-7019, Training for Contractor Personnel Interacting with Detainees (SEP 2006) (Section 1092 of Pubic Law 108-375).
- (3) 252.247-7023, Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631).
- (4) 252.247-7024, Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631).

(DFARS 252.212-7001)

**PART III – CONTRACT DOCUMENTS AND OTHER ATTACHMENTS**

Performance Specification MIL-PRF-25508G, 21 Nov 06	Attachment 1
Performance Specification MIL-PRF-27401F, 10 Jan 08	Attachment 2
H-14, Transport Equipment Delay Certificate	Attachment 3
Contractor Past Performance Data Sheet	Attachment 4
Small Business Subcontracting Plan	Attachment 5

**PART IV – SOLICITATION PROVISIONS****INSTRUCTIONS TO OFFERORS – COMMERCIAL ITEMS****ADDENDUM TO L2.05 (FAR 52.212-1)****L1.02 PROPOSAL ACCEPTANCE PERIOD (DESC NOV 1991)**

(a) **Acceptance period**, as used in this provision, means the number of calendar days available to the Government for awarding a contract from the date specified in this solicitation for receipt of proposals.

(b) This provision supersedes any language pertaining to the acceptance period that may appear elsewhere in this solicitation.

(c) The Government requires a minimum acceptance period of 90 calendar days.

(d) If the offeror specifies an acceptance period which is less than that required by the Government, such offer may be rejected.

(e) The offeror agrees to execute all that it has undertaken to do, in compliance with its offer, if such offer is acceptable to the Government and is accepted within the acceptance period stated in (c) above or within any extension thereof that has been agreed to by the offeror.

(DESC 52.215-9FB1)

**L2.11-4 E-MAIL PROPOSALS (DESC APR 2005)**

(a) Offerors may submit proposals via e-mail. E-mail proposals are subject to the same rules as paper proposals.

(b) E-mail receiving data and compatibility characteristics are as follows:

(1) E-mail address: [karen.harvey@dla.mil](mailto:karen.harvey@dla.mil)

(2) The Defense Energy Support Center accepts attachments in—

(i) Adobe Acrobat;

(ii) Microsoft Excel;

(iii) Microsoft Word; and

(iv) Microsoft PowerPoint.

(c) Initial proposals, modifications and proposal revisions submitted via e-mail must contain a signature.

(d) Attachments that are not in .pdf file format must be sent password protected for “read only” to ensure the integrity of the data submitted.

(e) Proposals submitted electronically through a single e-mail must be no more than 15 MB. DESC’s mail server will reject messages larger than 15 MB.

(f) The DESC e-mail filter will scan the incoming e-mail and attachments for viruses and key words. Abbreviations for terms such as “Analysts” or using “3Xs” as placeholders in a document are found in the filter’s adult content library and may result in the e-mail delivery being delayed. Offerors are encouraged to verify receipt of e-mail offers by contacting the Contracting Officer prior to the solicitation closing time.

(g) If any portion of an e-mail proposal received by the Contracting Officer is unreadable, the Contracting Officer will immediately notify the offeror and permit the offeror to resubmit the proposal. The method and time for resubmission shall be prescribed by the Contracting Officer after consultation with the offeror and the resubmission shall be considered as if it were received at the date and time of the original unreadable submission for the purpose of determining timeliness, provided the offeror complied with the e-mail submissions instructions provided in this paragraph and with the time and format requirements for resubmission prescribed by the Contracting Officer.

(h) The Government reserves the right to make award solely on the e-mail proposal. However, if requested to do so by the Contracting Officer, the apparently successful offeror promptly shall submit the complete signed original proposal.

(DESC 52.215-9FA8)

**L2.35 PROPOSAL FORMAT AND CONTENT (AEROSPACE ENERGY) (DESC OCT 2008)**

Proposals shall be submitted in two sections and clearly labeled **Price Proposal** and **Technical Proposal**.

**(a) PRICE PROPOSAL.**

(1) In the Schedule, Section B, Supplies or Services and Prices/Costs, offered prices shall be completed for each Contract Line Item Number (CLIN) unless the Schedule notes that multiple awards will be made. In that case, the offeror may select which CLINs or groups of CLINs, such as those applying to a specific customer location, against which to submit an offer;

(2) For each applicable box checked below, unit prices shall be formulated, as specified:

(i) **Product with no Monthly Facility Fee (MFF)**. The offeror shall include all fixed, variable and incremental costs to produce and prepare product for Government inspection and acceptance. Include all transportation and shipping costs to deliver the

product to the specified customer location if the product CLIN is designation as f.o.b. destination. For this solicitation, the applicable CLINs are 0001 - 0012.

(ii) **Product with an MFF CLIN.** The offeror shall include only the variable and incremental costs to produce and prepare the product for Government inspection and acceptance in the product CLIN. All fixed costs associated with the facility shall be included in the MFF, to include storage and distribution of Government-owned product, if required by the Statement of Objectives (SOO). For this solicitation, the applicable CLINs are *[Buyer fill in the CLIN(s)]* \_\_\_\_\_.

(iii) **Services CLIN(s), such as maintenance and repair of containers.** The offeror shall include all variable and fixed costs associated with the service, as described in the SOO, unless otherwise noted herein that those costs should be included in another CLIN: \_\_\_\_\_. For this solicitation, the applicable Services CLINs are \_\_\_\_\_.

(iv) **Repair Parts Specifically Identified in the Schedule.** Where the Government specifically identifies repair parts which will be reimbursed under the Contract, the offeror shall include in its offered price, on a per unit basis, all costs associated with that repair part, to include the applicable labor costs to install it. For this solicitation, the applicable CLINs are *[Buyer fill in the CLIN(s)]* \_\_\_\_\_.

(v) **Contractor-Provided Tank(s) CLIN(s).** The offeror shall include in each applicable CLIN all fixed and variable costs associated with leasing of a tank or multiple tanks to the Government under the contract. Separate CLINs have been established for the costs associated with the leasing of the tank(s) as compared to the costs associated with the tank(s) installation and removal. Where the incumbent is offering the same number and size of tanks previously provided under the previous contract, the incumbent need not propose a price for tank(s) installation. However, the incumbent shall propose a price for tank(s) removal. For this solicitation, the applicable CLINs are 0007AG – 0007AO, and 0007AS – 0007AT.

(vi) **Contractor provided equipment CLIN(s).** Where the SOO requires specific contractor-provided equipment for which a separate CLIN has been established for reimbursement under the resultant contract, the offeror shall include all fixed and variable costs associated with providing such equipment, to include but not limited to delivery, installation, calibration, maintenance and repair throughout the contract term, and removal at the expiration of the contract. For this solicitation, the applicable CLINs \_\_\_\_\_.

(vii) **Expedited/Emergency Delivery CLIN(s).** Where the Schedule has a CLIN for Expedited and/or Emergency delivery, as defined in the SOO, the offeror shall include all costs associated with such delivery on a per shipment basis. This encompasses additional labor and transportation costs anticipated to be incurred over and above normal delivery costs. Any product ordered with an Expedited and/or Emergency delivery shall be paid at the unit price of the applicable product CLIN. For this solicitation, the applicable CLINs are: 0003AF, 0005AF, 0006AF, 0010AF, and 0011AF.

(viii) **Hot Fill CLIN(s).** If the solicitation includes a “Hot Fill” CLIN, the offeror shall propose a per Hot Fill Unit Price. Examples of costs that should be included in the offeror’s per Hot Fill Unit Price but not limited to these, are additional support personnel required to accomplish the Hot Fill or additional time required at the delivery location in support of the Hot Fill. The per Hot Fill Unit Price shall not include the cost of the product consumed during the Hot Fill since the Contractor will be paid for the amount of product consumed under the applicable product CLIN. For this solicitation, the applicable CLINs are: 0001AG, 0002AG, 0003AG, 0004AF, 0005AG, 0006AG, 0007AG, 0008AG, 0009AG, 0010AG, 0011AG, and 0012AF.

(ix) **Additional CLIN(s) not described above to be priced by the offeror.** For this solicitation, the applicable CLINs are: Detention SubCLINs 0001AH, 0002AH, 0003AH, 0004AG, 0005AH, 0006AH, 0007AR, 0008AH, 0009AH, 0010AH, 0011AH, and 0012 AG.

(x) **Not Separately Priced (NSP) CLIN(s).** For CLINs shown as NSP, the offeror shall include the costs associated with that CLIN in the designated CLIN’s unit price. For this solicitation, the applicable Services CLINs are *[Buyer fill in the CLIN(s)]* \_\_\_\_\_.

(xi) **To Be Negotiated (TBN) CLIN(s).** For those CLINs designated as TBN, the Government will negotiate a unit price on a case-by-case basis, if and when requirements under the CLIN materialize. In order for the Government to add such a requirement to the contract under the TBN CLIN, the unit price must be determined fair and reasonable. For this solicitation, the applicable CLINs are *[Buyer fill in the CLIN(s)]* \_\_\_\_\_.

(xii) **Exceptions to the above.** SubCLINs 0001AF, 0002AF, 0008AF, and 0011AF are designated as Non-Routine Deliveries. However, the same explanation shown in (vii) above for Expedited/Emergency SubCLINs also applies to the Non-Routine Delivery SubCLINs.

(3) The Standard Form 1449 must be completed, as well as the MANUFACTURING AND FILLING POINTS and TRANSPORT TRUCK AND/OR TRUCK AND TRAILER FREE TIME AND DETENTION RATES (AEROSPACE ENERGY) clauses, if included, and all certifications and representations contained in Section K of the solicitation; and

(b) **TECHNICAL PROPOSAL.**

(1) **NONCOST FACTOR 1 – TECHNICAL CAPABILITY.** The offeror shall provide a technical proposal by completing the fill-in data requested in paragraphs (b)(1)(i) through (b)(1)(iv) and attaching supply commitment letters requested in paragraph (b)(1)(iv). The offeror may submit continuation sheets with this fill-in provision to provide additional technical narrative, however, the complete technical proposal, exclusive of any résumés, drawings, or blueprints, shall not exceed 12 pages. The proposal will be evaluated strictly on technical merit and should describe and justify the offeror's technical approach to the requirements of the work to be performed and/or delivery of product under the contract. The technical proposal should be specific and provide concise, straight-forward descriptions of the offeror's capability to perform the requirements of the contract. Proposals that are unrealistic in terms of the description of the offeror's

technical capability may be considered indicative of a lack of understanding of the solicitation’s requirements. Technical proposals shall include the following (any element you do not address shall be identified as **N/A**) **and apply only if the applicable box is checked:**

[ X ] (i) General description of how the offeror will ensure a reliable supply of on-spec product and/or service to meet the Government’s requirements as stated in the solicitation.

[ X ] (A) Production capability per day of proposed fill plant.

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[ X ] (B) Plant storage capacity for product offered.

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[ X ] (C) If the offeror will be making deliveries to customers, describe type, number and size of containers that will be used for delivery of product to each customer location that the offeror proposes on.

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[ ] (D) If the contract requires maintenance and repair of Government-owned equipment, such as repairs to cylinders or tube trailers, describe how such services will be performed to meet solicitation requirements.

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[X ] (E) Describe the in-process quality control procedures that will ensure the production and delivery of on-spec product.

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[ X ] (F) Describe offeror’s proposed quality sampling plan that will be implemented to assure individual shipments made under this solicitation meet the product quality requirements stated in the applicable specification or product description.

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[X ] (ii) Description of Contractor-furnished equipment at a location other than the Contractor’s facility (e.g., on Government property) such as storage tanks.

[ X ] (A) Describe all Contractor provided equipment to include a description of size, certifications, instrumentation (including alarms), design parameters, etc.

(B) Include a timeline for the purchase, installation, testing and commissioning of the equipment.

(iii) Describe the method for securing delivery container(s) and/or cargo tank openings with tamper indicating devices (i.e., seals) to prevent tampering and/or pilferage from the time the cargo tank is loaded until it is delivered to its destination. (Refer to the CONTRACTOR SEAL REQUIREMENT clause.)

(iv) For solicitations containing product CLINs, if the offeror is not the manufacturer of the product to be delivered under the contract, the offeror shall provide a detailed description of where the product(s) will be obtained. The offeror shall attach any written supply commitments that clearly indicate--

(A) The offeror's supplier is willing to provide the products and/or services required to be delivered/performed under any resultant contract for the duration of the delivery period shown in the Schedule; and

(B) Confirmation of the quantity and specification of the products to be delivered;

(v) This paragraph describes additional information for the Technical Proposal not asked for in above paragraphs.

(2) **NONCOST FACTOR 2 – PAST PERFORMANCE.** The offeror shall submit information regarding its past performance on the form entitled Contractor Performance Data Report, as attached to the solicitation. All contracts and subcontracts (completed or in progress) for the last three years awarded by DESC as well as other (completed or in progress) Government agencies or the private sector that are related to the proposed contract shall be included on the form. Failure to submit a complete list may reflect adversely on the offeror. The number of relevant past performance efforts submitted in accordance with the attachment shall not exceed five for the prime offeror. The Government reserves the right to make telephone contact with offerors, proposed subcontractors and references in order to confirm and/or clarify the past performance information submitted. The Government has the option to consider information from these sources, and any others that may be available, that it deems necessary in order to make an accurate assessment of the offeror's past performance. In addition, the offeror should provide additional information on any significant problems encountered and corrective actions taken under contract(s) which would otherwise cause an unacceptable rating in this factor.

(c) **EXCEPTIONS.** Exceptions (price or technical) taken to the terms and conditions of the solicitation and/or any of its formal attachments shall be identified. Each exception shall be specifically related to each paragraph and/or specific part of the solicitation to which the exception is taken. Provide rationale in support of the exception and fully explain the impact, if any, on the performance, price, and specific requirements of the solicitation. Failure to comply with the terms and conditions of the solicitation may result in the offeror being removed from consideration for award.

(DESC 52.215-9F98)

**L54.02 SITE VISIT (AEROSPACE ENERGY) (DESC APR 2006)**

(a) It is the responsibility of the offerors to inspect the site where supplies are to be delivered and/or services are to be performed and to obtain all available information about the site necessary to satisfy themselves about general and local conditions that may

affect delivery as well as cost of contract performance, to the extent that the information is reasonably obtainable. Offerors are responsible for any costs incurred for any site inspection and for obtaining information.

(b) In no event shall failure to inspect the site constitute grounds for a claim after contract award.

(c) Offerors who are interested in a site inspection should not contact the customer(s) directly, but forward such request(s), in writing, directly to the DESC Point of Contact for this procurement, shown in Block 7 of the Standard Form 1449.

(DESC 52.237-9F06)

## **EVALUATION – COMMERCIAL ITEMS**

### **M2.14 EVALUATION – COMMERCIAL ITEMS (AEROSPACE ENERGY) (DESC OCT 2008)**

(a) Award will be made on the basis of proposals meeting or exceeding the specific evaluation criteria contained in the solicitation. Non-cost factors to be evaluated shall be technical capability and past performance. In accordance with FAR 15.101-2(b)(3), proposals will be evaluated for acceptability but not ranked using the non-cost/price factors.

(b) Technical capability will be measured against requirements specified in the solicitation. As such, technical capability is considered acceptable when the offeror's proposal is in compliance with the requirements of the solicitation. Specific criteria used to judge acceptability are as follows and apply ONLY if the applicable box is checked:

(1) Acceptability of the narrative describing how the offeror will ensure a reliable supply of on-spec product and/or services to meet the annual estimated quantities in the RFP's Schedule.

(2) Acceptability of the narrative describing any Contractor-furnished equipment at a location other than the Contractor's facility (e.g., on Government property).

(3) Acceptability of method for securing delivery container and/or cargo tank openings with indicating devices (i.e., seals) to prevent tampering and/or pilferage from the time the cargo tank is loaded until it is delivered to its destination.

(4) Acceptability of the offeror's description of where the product(s) will be obtained and any written supply commitments if the offeror is not the producer of the product to be delivered under the contract.

(5) This paragraph describes additional criteria used to evaluate technical capability not described in the above paragraphs, if applicable.

Emergency and Non-Routine Delivery subCLINs: 0001AF, 0002AF, 0003AF, 0005AF, 0006AF, 0008AF, 0009AF, 0010AF, and 0011AF.

Detention subCLINs: 0001AH, 0002AH, 0003AH, 0004AG, 0005AH, 0006AH, 0007AR, 0008AH, 0009AH, 0010AH, 0011AH, and 0012 AG.

(c) Past performance shall generally include verification of performance with the offeror's past and current customers, to include Federal, State, and local governments as well as private entities. The form entitled Contractor Performance Data Sheet, located in Section J of the solicitation, may be used to provide relevant performance history pursuant to this solicitation. In accordance with FAR 15.305(a)(2)(iv), offerors without a record of relevant past performance or for whom information on past performance is not available may not be evaluated favorably or unfavorably on past performance. Additionally, past performance data may be obtained through the Past Performance Information Retrieval System, similar systems or other Government departments and agencies, questionnaires tailored to the circumstances of this acquisition, Defense Contract Management Agency channels, interviews with program managers and contracting officers, and other sources known to the Government (including commercial sources). Offerors will be given the opportunity to address any negative performance information resulting from the past performance assessment inquiries.

(d) An offeror whose proposal is evaluated as acceptable from both a technical capability perspective as well as for past performance will be considered technically acceptable.

(e) After evaluating technical capability and past performance, the Contracting Officer will award based on the following price evaluation procedure(s) and only apply if the applicable box is checked:

(1) **For F.O.B. Origin product CLINs.** For price evaluation purposes, the evaluated price of each CLIN or subCLIN for product (AA through \_\_\_\_ ) [Buyer fill in the CLIN(s)] to be delivered on an f.o.b. origin basis will be calculated by multiplying the estimated quantity by the proposed unit price of the product. To each CLIN/subCLIN, the Government will add as an "other price-related factor," the Government's estimated costs for transporting the product from the offeror's proposed fill plant, production facility, and/or storage facility, as stated in the offeror's proposal, to the individual customer locations designated in an attachment to the solicitation. The estimated number of shipments shown in the attachment will also apply. The lowest laid down price is calculated by adding the sum of the evaluated prices for each CLIN/subCLIN to the Government's total estimated cost for transportation and the total of all "other price related factors", if any, as described in the paragraph below. Transportation rates are derived from--

(i) For CONUS locations, the Surface Deployment and Distribution Command's (SDDC's) competitively awarded contracts will be used.

(ii) For OCONUS locations, the Government rates for both air and sea transportation will be taken from the DoD's Single Mobility System (SMS) Air Cargo/PAX Cost Calculator.

(2) **For F.O.B. Destination product CLINs.** For price evaluation purposes, the evaluated price of each CLIN or subCLIN for product (0001 through 0012) will be calculated by multiplying the estimated quantity by the proposed unit price of the product(s), which should include all costs associated with the offeror's delivery of product to the location specified in the Schedule. F.o.b. destination CLINs are normally individual DESC customer locations, unless otherwise specified.

(3) **Non-product CLINs/subCLINs.** For price evaluation purposes, the following non-product CLINs/subCLINs will be evaluated for award: **0007AH through 0007AU**. Each non-product CLIN/subCLIN's evaluated price will be calculated by multiplying the estimated quantity by the offered unit price. Offerors who do not propose on all non-product CLINs and subCLINs stated in the Schedule (where one award will be made), or where a group of CLINs/subCLINs will be evaluated for award, or where the Schedule contains specific customer locations to be evaluated and awarded, may not be considered for evaluation and award unless the offeror proposes prices on all applicable CLINs/subCLINs.

(4) This paragraph describes the evaluation process for product or non-product CLINs/subCLINs or additional "other price related factors" not otherwise described in any of the above paragraphs, if applicable. **[Buyer fill in information or indicate N/A.]**

(5) The offered prices for the following CLINs/subCLINs will not be included in the evaluation for award, but will be evaluated for price reasonableness and included as a CLIN/subCLIN in each contract award: 0001AG, 0002AG, 0003AG, 0004AG, 0005AG, 0006AG, 0007AG, 0008AG, 0009AG, 0010AG, 0011AG, and 0012AF.

(6) **Lowest Total Evaluated Price for F.O.B. Origin Requirements.** If Schedule B includes both f.o.b. origin product CLINs as well as non-product CLINs that are to be evaluated in accordance with this provision, the evaluated prices for all the non-product CLINs will be added to the lowest laid down price of all the product CLINs that are otherwise designated as one group, such as in a region, to determine the lowest total evaluated price. Otherwise, only the product CLINs (or those applicable to the designated group) will be added to determine the lowest total evaluated price. If no region or group is designated in the Schedule, all the evaluated prices of all the CLINs in the solicitation will be added together for determination of the lowest total evaluated price.

(7) **Lowest Total Evaluated Price for F.O.B. Destination Requirements.** If Schedule B includes both f.o.b. destination product CLINs as well as non-product CLINs that are to be evaluated in accordance with this provision, the evaluated prices for all the non-product CLINs will be added to the evaluated price(s) of the applicable f.o.b. destination product CLINs to determine the lowest total evaluated price. Otherwise, only the product CLINs applicable to the group or designated customer location will be added to determine the lowest total evaluated price. Where more than one customer location is contained in the Schedule, the lowest total evaluated price shall be all product CLINs and non-product CLINs for a specific customer location, added together.

(8) If Schedule B is for services only and as such does not include any product CLINs, the total evaluated price will be the total of the evaluated prices for all the services CLINs, as designated in paragraph (e)(3) above.

(f) If options are included, the Government will evaluate offered prices by using the same price evaluation procedures as described above, except, as follows: **[Buyer fill in or indicate N/A.]** \_\_\_\_\_

The Government may determine that an offered price under an option CLIN is unacceptable if the option prices are significantly unbalanced. Evaluation of options shall not obligate the Government to exercise the option(s).

(g) **BASIS FOR AWARD.** The Contracting Officer will award to the responsible, technically acceptable offeror with the lowest total evaluated price for the designated group of CLINs and/or customer locations, including options, if contained in the solicitation. If group(s) of CLINs or individual customer locations are not otherwise designated in the Schedule, only one contract will be awarded for all the CLINs specified in the Schedule. Where the Government is soliciting for a group of CLINs, such as on a regional basis, as well as for individual customer locations on a f.o.b. destination basis, more than one contract award may be made as price evaluation and award will be made on a customer location by customer location basis.

(h) A written notice of award or acceptance of offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

(DESC 52.212-9F70)

## **OFFEROR REPRESENTATIONS AND CERTIFICATIONS – COMMERCIAL ITEMS**

**K1.01-10 OFFEROR REPRESENTATIONS AND CERTIFICATIONS - COMMERCIAL ITEMS (ALTERNATES I/II)  
(SEP 2006/APR 2002/OCT 2000)**

An offeror shall complete only paragraph (k) of this provision if the offeror has completed the annual representations and certifications electronically at <http://orca.bpn.gov>. If an offeror has not completed the annual representations and certifications electronically at the ORCA website, the offeror shall complete only paragraphs (b) through (j) of this provision.

(a) **DEFINITIONS.** As used in this provision--

**Emerging small business** means a small business concern whose size is no greater than 50 percent of the numerical size standard for the NAICS code designated.

**Forced or indentured child labor means** all work or service—

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract, the enforcement of which can be accomplished by process of penalties.

**Manufactured end product** means any end product in Federal Supply Classes (FSC) 1000-9999, except--

(1) FSC 5510, Lumber and Related Basic Wood Materials;

(2) Federal Supply Group (FSG) 87, Agricultural Supplies;

(3) FSG 88, Live Animals;

(4) FSG 89, Food and Related Consumables;

(5) FSC 9410, Crude Grades of Plant Materials;

(6) FSC 9430, Miscellaneous Crude Animal Products, Inedible;

(7) FSC 9440, Miscellaneous Crude Agricultural and Forestry Products;

(8) FSC 9610, Ores;

(9) FSC 9620, Minerals, Natural and Synthetic; and

(10) FSC 9630, Additive Metal Materials.

**Place of manufacture** means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

**Service-disabled veteran-owned small business concern--**

(1) Means a small business concern—

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) **Service-disabled veteran** means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

**Small business concern** means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

**Veteran-owned small business concern means a small business concern--**

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly-owned business, not less than 51 percent of the stock of which is owned by one or more veterans, and

(2) The management and daily business operations of which are controlled by one or more veterans.

**Women-owned business concern** means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

**Women-owned small business concern** means a small business concern--

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(b) **TAXPAYER IDENTIFICATION NUMBER (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701).** (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

**(3) TAXPAYER IDENTIFICATION NUMBER (TIN).**

- ] TIN: \_\_\_\_\_
- ] TIN has been applied for.
- ] TIN is not required because:

] Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.

- ] Offeror is an agency or instrumentality of a foreign government;
- ] Offeror is an agency or instrumentality of a Federal government;

**(4) TYPE OF ORGANIZATION.**

- ] Sole proprietorship;
- ] Partnership;
- ] Corporate entity (not tax-exempt);
- ] Corporate entity (tax-exempt);
- ] Government entity (Federal, State, or local);
- ] Foreign government;
- ] International organization per 26 CFR 1.6049-4;
- ] Other: \_\_\_\_\_.

**(5) COMMON PARENT.**

- ] Offeror is not owned or controlled by a common parent.
- ] Name and TIN of common parent:  
 Name \_\_\_\_\_  
  
 TIN \_\_\_\_\_

(c) Offerors must complete the following representations when the resulting contract is to be performed in the United States or its outlying areas. Check all that apply.

**(1) SMALL BUSINESS CONCERN.** The offeror represents as part of its offer that it--

- ] is
- ] is not

a small business concern.

**(2) VETERAN-OWNED SMALL BUSINESS CONCERN. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.)** The offeror represents as part of its offer that it—

- ] is
- ] is not

a veteran-owned small business concern.

**(3) SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS CONCERN. (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.)** The offeror represents as part of its offer that it—

- ] is
- ] is not

a service-disabled veteran-owned small business concern.

**(4) SMALL DISADVANTAGED BUSINESS CONCERN. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.)** The offeror represents, for general statistical purposes, that it--

- ] is

is not

a small disadvantaged business concern as defined in 13 CFR 124.1002.

**(5) WOMEN-OWNED SMALL BUSINESS CONCERN. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.)** The offeror represents that it--

is  
 is not

a woman-owned small business concern.

**NOTE: Complete paragraphs (c)(6) and (c)(7) only if this solicitation is expected to exceed the simplified acquisition threshold.**

**(6) WOMEN-OWNED BUSINESS CONCERN (OTHER THAN SMALL BUSINESS CONCERN). (Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.)** The offeror represents that it -

is

a women owned business concern.

**(7) TIE BID PRIORITY FOR LABOR SURPLUS AREA CONCERNS.** If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price.

**(8) SMALL BUSINESS SIZE FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM AND FOR THE TARGETED INDUSTRY CATEGORIES UNDER THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM.** (Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.)

**(i) (Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the designated industry groups (DIGs)).** The offeror represents as part of its offer that it--

is  
 is not

an emerging small business.

**(ii) (Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or designated industry groups (DIGs)).** The offeror represents as follows:

(A) The offeror's number of employees for the past 12 months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) The offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

(Check one of the following:)

<u>NUMBER of EMPLOYEES</u>	<u>AVERAGE ANNUAL GROSS REVENUES</u>
<input type="checkbox"/> 50 or fewer	<input type="checkbox"/> \$1 million or less
<input type="checkbox"/> 51 - 100	<input type="checkbox"/> \$1,000,001 - \$2 million
<input type="checkbox"/> 101 - 250	<input type="checkbox"/> \$2,000,001 - \$3.5 million
<input type="checkbox"/> 251 - 500	<input type="checkbox"/> \$3,500,001 - \$5 million
<input type="checkbox"/> 501 - 750	<input type="checkbox"/> \$5,000,001 - \$10 million
<input type="checkbox"/> 751 - 1,000	<input type="checkbox"/> \$10,000,001 - \$17 million
<input type="checkbox"/> Over 1,000	<input type="checkbox"/> Over \$17 million

(9) **(Complete only if the solicitation contains the clause at FAR 52.219-23, NOTICE OF PRICE EVALUATION ADJUSTMENT FOR SMALL DISADVANTAGED BUSINESS CONCERNS, or FAR 52.219-25, SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM - DISADVANTAGED STATUS AND REPORTING, and the offeror desires a benefit based on its disadvantaged status.)**

(i) **GENERAL.** The offeror represents that either--

(A) It--

is

is not

certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net), and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It--

has

has not

submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) **JOINT VENTURE UNDER THE PRICE EVALUATION ADJUSTMENT FOR SMALL DISADVANTAGED BUSINESS CONCERNS.** The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(9)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture:

(iii) **ADDRESS.** The offeror represents that its address—

is

is not

in a region for which a small disadvantaged business procurement mechanism is authorized and its address has not changed since its certification as a small disadvantaged business concern or submission of its application for certification. The list of authorized small disadvantaged business procurement mechanisms and regions is posted at <http://www.arnet.gov/References/sdbadjustments.htm>. The offeror shall use the list in effect on the date of this solicitation. **Address**, as used in this provision, means the address of the offeror as listed on the Small Business Administration's register of small disadvantaged business concerns or the address on the completed application that the concern has submitted to the Small Business Administration or a Private Certifier in accordance with 13 CFR part 124, subpart B. For joint ventures, **address** refers to the address of the small disadvantaged business concern that is participating in the joint venture.

(10) **HUBZONE SMALL BUSINESS CONCERN. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.)** The offeror represents as part of its offer that--

(i) It--

is

is not

a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns Maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126; and

(ii) It--

- is
- is not

a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. **(The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture:**

\_\_\_\_\_.)  
**Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.**

**(11) (Complete if the offeror represented itself as disadvantaged in paragraph (c)(4) or (c)(9) of this provision.)** The offeror shall check the category in which its ownership falls:

- Black American
- Hispanic American
- Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).
- Asian-Pacific American (persons with origin from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).
- Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).
- Individual/concern, other than one of the preceding.

**(d) REPRESENTATIONS REQUIRED TO IMPLEMENT PROVISIONS OF EXECUTIVE ORDER 11246.**

**(1) PREVIOUS CONTRACTS AND COMPLIANCE.** The offeror represents that--

(i) It--

- has
- has not

participated in a previous contract or subcontract subject to the EQUAL OPPORTUNITY clause of this solicitation; and

(ii) It--

- has
- has not

filed all required compliance reports.

**(2) AFFIRMATIVE ACTION COMPLIANCE.** The offeror represents that--

(i) It--

- has developed and has on file
- has not developed and does not have on file

at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR Subparts 60-1 and 60-2), or

(ii) It--

[ ] has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) **CERTIFICATION REGARDING PAYMENTS TO INFLUENCE FEDERAL TRANSACTIONS (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$100,000).** By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) **TRADE AGREEMENTS CERTIFICATE (JAN 2005) (DFARS 252.225-7020). (Applies only if DFARS clause 252.225-7021, TRADE AGREEMENTS (NOV 2006), is incorporated by reference in this solicitation.) DFARS 252.225-7020 is hereby incorporated by reference in its entirety; only the certification portion is reproduced below.**

(1) For all line items subject to the TRADE AGREEMENTS clause of this solicitation, the offeror certifies that each end product to be delivered under this contract, except those listed in subparagraph (2) below, is a U.S.-made qualifying country, or designated country end product.

(2) The following supplies are other nondesignated country end products:

_____	_____
(Line item no.)	(Country of origin)

(g) **BUY AMERICAN ACT – FREE TRADE AGREEMENTS – BALANCE OF PAYMENTS PROGRAM CERTIFICATE (OCT 2006) (DFARS 252.225-7035). (Applies only if DFARS clause 252.225-7036, BUY AMERICAN ACT – FREE TRADE AGREEMENTS – BALANCE OF PAYMENTS PROGRAM (OCT 2006) is incorporated by reference in this solicitation.) DFARS 252.225-7035 is hereby incorporated by reference in its entirety; only the certification portion is reproduced below.**

(1) For all line items subject to the BUY AMERICAN ACT – FREE TRADE AGREEMENTS – BALANCE OF PAYMENTS PROGRAM clause of this solicitation, the offeror certifies that—

(i) Each end product, except the end products listed in subparagraph (2) below, is a domestic end product; and

(ii) Components of unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.

(2) The offeror shall identify all end products that are not domestic end products.

(i) The offeror certifies that the following supplies are qualifying country (except Australian and Canadian) end products:

_____	_____
(Line item number)	(Country of origin)

(ii) The offeror certifies that the following supplies are Free Trade Agreement country end products other than Bahrainian end products or Moroccan end products:

_____	_____
(Line item number)	(Country of origin)

(iii) The following supplies are other foreign end products including end products manufactured in the United States that do not qualify as domestic end products:

_____	_____
(Line item number)	(Country of origin (if known))

(h) **CERTIFICATION REGARDING DEBARMENT, SUSPENSION OR INELIGIBILITY FOR AWARD (EXECUTIVE ORDER 12549).**

The offeror certifies, to the best of its knowledge and belief, that--

(1) The offeror and/or any of its principals

- are
- are not

presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency, and

- (2)  have or
- have not,

within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

- are or
- are not

presently indicted for, or otherwise criminally or civilly charged by a government entity with, commission of any of these offenses.

**(i) CERTIFICATION REGARDING KNOWLEDGE OF CHILD LABOR FOR LISTED END PRODUCTS (EXECUTIVE ORDER 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]**

(1) List End Product.

(Insert end product)	(Insert country of origin)
(Insert end product)	(Insert country of origin)
(Insert end product)	(Insert country of origin)
(Insert end product)	(Insert country of origin)
(Insert end product)	(Insert country of origin)

**(2) CERTIFICATION. [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]**

(i)  The offeror will not supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

(ii)  The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that is had made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end

product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(j) **PLACE OF MANUFACTURE.** (Does not apply unless the solicitation is predominantly for the acquisition of manufactured end products.) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly--

(1)  In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or

(2)  Outside the United States.

(k) (1) **ANNUAL REPRESENTATIONS AND CERTIFICATIONS.** Any changes provided by the offeror in paragraph (j) of this provision do not automatically change the representations and certifications posted on the Online Representations and Certifications Application (ORCA) website.

(2) The offeror has completed the annual representations and certifications electronically via the ORCA website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of this offer that the representations and certifications currently posted electronically at FAR 52.212-3, OFFEROR REPRESENTATIONS AND CERTIFICATIONS – COMMERCIAL ITEMS, have been entered or updated in the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for paragraphs \_\_\_\_\_.

(FAR 52.212-3/II)

## ADDENDUM TO K1.01-10

### K1.01-12 SMALL BUSINESS PROGRAM NOTICE (DESC MAR 1999) NOTICE.

(a) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(b) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small or small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(1) Be punished by imposition of a fine, imprisonment, or both;

(2) Be subject to administrative remedies, including suspension and debarment; and

(3) Be ineligible for participation in programs conducted under the authority of the Act.

(DESC 52.219-9F25)

### K1.05 OFFEROR REPRESENTATIONS AND CERTIFICATIONS - COMMERCIAL ITEMS (JUN 2005)

(a) **DEFINITIONS.** As used in this clause--

(1) **Foreign person** means any person other than a United States person as defined in Section 16(2) of the Export Administration Act of 1979 (50 U.S.C. App. Sec 2415).

(2) **United States** means the 50 States, the District of Columbia, outlying areas, and the outer Continental Shelf as defined in 43 U.S.C. 1331.

(3) **United States person** is defined in Section 16(2) of the Export Administration Act of 1979 and means any United States resident or national (other than an individual resident outside the United States and employed by other than a United States person), any domestic concern (including any permanent domestic establishment of any foreign concern), and any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern that is controlled in fact by such domestic concern, as determined under regulations of the President.

(b) **CERTIFICATION.** By submitting this offer, the offeror, if a foreign person, company, or entity, certifies that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. Sec 2407(a) prohibits a United States person from taking.

(DFARS 252.212-7000, tailored)

### K15 RELEASE OF UNIT PRICES (DESC MAR 2004)

The Defense Energy Support Center (DESC) will continue to release unit prices of successful offerors after the contract award pursuant to 10 U.S.C. 2305(g)(2), FAR 15.506(d)(2) and 32 CFR 286h-3. Unit prices are the bottom-line price per unit of product and may include the total contract price. They do not include any breakout of costs, such as transportation or overhead, and do not disclose the offeror's anticipated profit or any pricing factors.

(DESC 52.224-9F25)

**K33.01 AUTHORIZED NEGOTIATORS (DESC APR 2007)**

The offeror or quoter represents that the following persons are authorized to negotiate on its behalf with the Government in connection with this request for proposals or quotations.

<u>NAME</u>	<u>TITLE</u>	<u>PHONE NUMBER</u>	<u>E-MAIL ADDRESS</u>
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(DESC 52.215-9F28)

**K45.04 FACSIMILE INVOICING (DESC JUL 1998)**

(a) Submission of invoices by facsimile (FAX) is authorized when the offeror will utilize this method of invoicing at all times.

(b) Offeror shall indicate whether or not invoices will be submitted via FAX:

[ ] YES [ ] NO

(c) Invoicing by facsimile shall be in accordance with the procedures of the applicable paying office.

(d) **RETURN OF INVOICES BY THE PAYING OFFICE.**

(1) Invoices deemed improper in accordance with the Prompt Payment Act may be returned to the Contractor via FAX with the reason for the return clearly annotated.

(2) The offeror's/Contractor's FAX number for returning improper invoices is \_\_\_\_\_.

(DESC 52.232-9F10)

**K94 CERTIFICATION REGARDING RESPONSIBILITY MATTERS (MAY 2008)**

(a) (1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) [ ] are,  
[ ] are not

presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any

Federal agency;

(B) [ ] have,  
[ ] have not

within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property; and

(C) [ ] are,  
[ ] are not

presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision; and

(D) [ ] have,  
[ ] have not

within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds \$3,000 for which the liability remains unsatisfied.

(1) Federal taxes are considered delinquent if both of the following criteria apply:

(i) **The tax liability is finally determined.** The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.

(ii) **The taxpayer is delinquent in making payment.** A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(2) **Examples.**

(i) The taxpayer has received a statutory notice of deficiency, under I.R.C. §6212, which entitled the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(ii) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. §6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

(iii) The taxpayer has entered into an installment agreement pursuant to I.R.C §6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.

(iv) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. 362 (the Bankruptcy Code).

(ii) The Offeror--

[ ] has,  
[ ] has not

within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) **Principals**, for the purposes of this certification, means officers; directors; owners; partners; and persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(FAR 52.209-5)

METRIC

**MIL-PRF-25508G**  
**21 November 2006**

**SUPERSEDING**  
**MIL-PRF-25508F**  
**19 October 1995**

## PERFORMANCE SPECIFICATION

### PROPELLANT, OXYGEN

This specification is approved for use by all Departments and Agencies of the Department of Defense.

Comments, suggestions, or questions on this document should be addressed to DET 3, WR-ALC/AFTT, 2430 C Street, Bldg 70, Area B, Wright-Patterson AFB OH 45433-7632 or e-mailed to [AFPET.AFTT@wpafb.af.mil](mailto:AFPET.AFTT@wpafb.af.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

AMSC N/A

FSC 9135

**DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.**

# MIL-PRF-25508G

## 1. SCOPE

1.1 Scope. This specification covers the requirements for three grades and two types of oxygen.

1.2 Classification. The oxygen shall be of the following types and grades as specified (see 6.2).

1.2.1 Types. The types of oxygen are as follows:

Type I – Gaseous

Type II – Liquid

1.2.2 Grades. The grades of oxygen are as follows:

Grade A – 99.6 percent pure, standard

Grade B – 99.5 percent pure, reduced standard

Grade F – 99.990 percent pure, fuel cell and breathing

## 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following standard forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of this document are those cited in the solicitation or contract (see 6.2).

### COMMERCIAL ITEM DESCRIPTION

A-A-58092                      Tape, Antiseize, Polytetrafluorethylene

(Copies of this document is available online at <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil> or by mail from the Standardization Document Order Desk, 700 Robbins Avenue, Bldg 4D, Philadelphia PA 19111-5094.)

2.3 Non-government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

## MIL-PRF-25508G

### ASTM INTERNATIONAL (ASTM)

ASTM E 29	Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
ASTM F 307	Standard Practice for Sampling Pressurized Gas for Gas Analysis
ASTM F 310	Standard Practice for Sampling Cryogenic Aerospace Fluids

(Copies of these documents are available online at <http://www.astm.org> or by mail from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA, 19428-2959)

### COMPRESSED GAS ASSOCIATION (CGA)

CGA G-4.3	Commodity Specification for Oxygen
CGA P-15	Filling of Industrial and Medical Nonflammable Compressed Gas Cylinders

(Copies of these documents are available online at <http://www.cganet.com> or by mail from the Compressed Gas Association, Inc., 4221 Walney Road, 5<sup>th</sup> floor, Chantilly, VA 20151-2923)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 3. REQUIREMENTS

3.1 Grade requirements. The purity and impurity concentrations as applicable to each grade of oxygen shall conform to the limits of Table I when tested in accordance with the applicable test method also specified in Table I. Other limits and tests may be specified by the procuring activity (see 6.2).

3.2 Limiting values. The following applies to all specified limits in this specification. For purposes of determining conformance with these requirements, an observed value or a calculated value shall be rounded off "to the nearest unit" in the last right-hand digit used in expressing the specification limit according to the rounding-off method of ASTM E 29 Standard Practice for using Significant Digits in Test Data to Determine Conformance with Specifications.

3.3 Filter. A filter with no more than a 10-micrometer nominal and 40-micrometer absolute rating shall be installed between the manufacturer's plant system and the manifold used to fill the gas or liquid containers for delivery.

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**TABLE I. Grade limits for oxygen.**

	Grade			Test Method
	A	B	F	
Purity, percent by volume, min	99.6	99.5	99.990	4.4.1
Impurities, ppm by volume, max	4000	5000	100	4.4.1
Total hydrocarbons as methane	50	67.7	20	4.4.2
Water	3	26.3	3	4.4.2
Methane	Note a	Note a	16	4.4.2
Ethane	Note a	Note a	2	4.4.2
Propane and higher hydrocarbons as propane	Note a	Note a	1	4.4.2
Nitrous oxide	Note a	Note a	1	4.4.2
Halogenated hydrocarbons	Note a	Note a	1	4.4.2
Carbon monoxide and carbon dioxide	Note a	Note a	1	4.4.2
Other (N, Ar, Kr, etc.)	Note a	Note a	75	4.4.2
Odor	Note a	Note a	None	4.4.2
Particulate <sup>b</sup> , mg/L, max	1.0	1.0	1.0	4.4.3
<p>a. No limit for this grade.                      b. Applies to Type II product only. The particulate test requirement and limit may be deleted by the procuring activity (see 6.2).</p>				

3.4 Filled containers (Type I only).

3.4.1 Filling Pressure. The container filling pressure shall not differ from that required by the contract by more than 1.0% at 70°F when tested as specified in 4.5.1. In no case shall the filling pressure exceed the rated service pressure of the container. Pressure-Temperature Filling Charts in CGA P-15 may be used.

3.4.2 Leakage. Cylinders shall not leak when tested according to 4.5.2.

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## 4. VERIFICATION

4.1 Points of inspection (see 6.2). Unless otherwise specified, acceptance tests shall be conducted at the site of filling prior to shipment or departure.

4.2 Conformance inspection. Quality conformance tests shall consist of the following:

- a. Individual tests (Type I only) 4.2.1
- b. Sampling tests 4.2.2

4.2.1 Individual tests (Type I only). Each container (cylinder or tube) shall be subjected to the following tests as described under 4.5.

- a. Filling pressure 4.5.1
- b. Leakage 4.5.2

4.2.2 Sampling test. The number of oxygen containers shall be selected in accordance with Table II and subjected to the tests required by Table I.

**Table II. Sampling for test.**

Number of containers in lot	Number of containers to be sampled
1	1
2 – 40	2
41 – 70	3
71 – over	4

### 4.2.3 Lot and Container Definitions

4.2.3.1 Lot: A lot shall be defined as one of the following

- a. All of the oxygen supplied in one or more containers filled from one manifold at the same time.
- b. All of the oxygen filled from a single storage tank that is homogenous at the time of withdrawal and is not added to while being withdrawn. After each addition to the storage tank, the contents shall constitute a separate lot.

4.2.3.2 Container: A container is defined as a shipping conveyance consisting of one cylinder or tube, or multiple cylinders or tubes that are interconnected by a single manifold that equalizes the pressure across all the cylinders or tubes to form one unit.

4.2.4 Sample. Each sample shall be of sufficient size to conduct all the quality conformance tests as specified herein. Unless otherwise specified, the quality conformance tests shall be performed on each required sample (see 6.2). When required, an equivalent sample shall be forwarded to a laboratory designated by the procuring activity for testing.

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4.2.4.1 Sampling methods. All apparatus used shall be made of suitable materials. Each sample taken for analysis shall be representative of the entire contents of the container being sampled. Unless otherwise specified in the acquisition requirements (see 6.2), sampling may be accomplished by the following methods.

a. Type I, gaseous oxygen may be sampled in accordance with ASTM F 307, for Type II, liquid oxygen may be sampled in accordance with ASTM F 310. It is critical that the outlet of the sampling port and the other equipment used in this process meet oxygen system cleanliness standards. Use an oxygen compatible cleaning solvent in accordance with local procedures for oxygen cleanliness.

b. By connecting the shipping container being sampled directly to the analytical equipment using suitable pressure regulation as required. It is critical that the outlet of the sampling port and the other equipment used in this process meet oxygen system cleanliness standards. Use an oxygen compatible cleaning solvent in accordance with local procedures for oxygen cleanliness.

4.2.5 Non-bulk Containers. Non bulk containers are defined as containers with a water capacity of 400 liters, or less. The number of non-bulk containers Type I (gaseous) or Type II (liquid) oxygen will be in accordance with Table II. Containers to be sampled may be selected at random.

4.2.6 Bulk Containers. Bulk containers are defined as having a water capacity in excess of 400 liters. Each bulk container filled with Type I (gaseous) and Type II (liquid) oxygen constitutes a lot and shall be sampled.

4.2.6.1 Continuous service. (see 6.4.1) Unless otherwise specified by the procuring activity, the following sample option for oxygen shall be used for storage and transport tanks engaged in continuous oxygen service (see 6.2). Contractor shall sample the contents of each transport tank engaged in continuous oxygen service at least once every seven days at uniform intervals of time. Samples shall be taken from the filled transport tanks. Contractor shall sample the contents of each transport tank when entering continuous service and when the transport tank has remained empty for a period greater than 24 hours. When empty, all ports and vents shall remain closed to the atmosphere. While in continuous service, compliance with quality conformance tests specified herein shall be determined by sampling the filling point storage tank after each addition or, in case of continuous production, at established intervals not less frequent than once every 24 hours. When a storage tank is being filled during a change of duty shift, sampling shall be performed after filling.

4.3 Rejection. When any sample tested in accordance with 4.4 fails to conform to the requirements specified herein, the entire lot represented by the sample shall be rejected.

4.4 Analytical procedures. Unless otherwise specified, samples shall be analyzed according to the procedures described below (see 6.2). Calibration gas standards may be required to calibrate (zero and span) analytical instruments used to determine the purity and impurity contents of the oxygen. The accuracy of the calibration gas standards is to be traceable to the National Institute of Standards and Technology (NIST). A suggested procedure for infrared analysis is provided in 6.7.

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4.4.1 Purity. Methods shall be selected from CGA G-4.3 except for grade F. The purity of grade F shall be determined by difference as follows:

$$\%O_2 = 100 - 10^4 \sum l$$

where  $\sum l$  equals the sum of the water content, total hydrocarbons, nitrous oxide, carbon dioxide, carbon monoxide, and inert gases in ppm by volume.

4.4.2 Gaseous impurities. Methods shall be selected from those of CGA G-4.3.

4.4.3 Particulate content. A filter holder assembly (Pall Life Sciences part No. 2220) or equivalent, modified as shown in Figure 1, shall be attached to the withdrawal line of the vessel to be utilized to fill the tanks. A preweighed filter paper (47 mm glass fiber paper, type A/E or equivalent) shall be placed on top of another filter of the same kind. The filters shall then be placed on the porous filter support, which, in turn, shall be placed in the filter holder as shown in Figure 1. The male threads of the filter holder shall be wrapped with thin, nonadhesive-backed polytetrafluorethylene tape A-A-58092, or technical equivalent, to prevent galling of the threads. The holder shall be tightened by hand as tight as possible to prevent bypassing of the filter element. The discharge liquid from the filter housing shall be collected in a clean, uninsulated, ambient temperature vessel marked to indicate when 5 liters of liquid have been collected. The liquid flow shall be terminated when 5 liters of liquid have been collected. The filter holder shall be removed from the line and permitted to reach ambient temperature. The warmup to ambient temperature may be expedited by use of an oven or other heat source. Care shall be exercised to ensure that any airflow which enters the unit will be directed through the inlet of the assembly to prevent displacing and particles from the surface of the filter. Upon warmup, the other side of the holder shall be wiped with a clean cloth and the holder then disassembled. The filter paper shall be closely inspected. The test shall be repeated if evidence of either (a) the filter not being securely clamped by uniform depression of its edge; (b) the filter having been cut by the holder; or (c) when dirt particles are detected in the clamped area indicating bypassing had been encountered. The test shall also be repeated when either the bottom filter shows any discoloration or when leakage of liquid from the filter holder is detected. Upon completion of a valid test the filter shall be removed from the housing and weighed to the nearest 0.1 mg.

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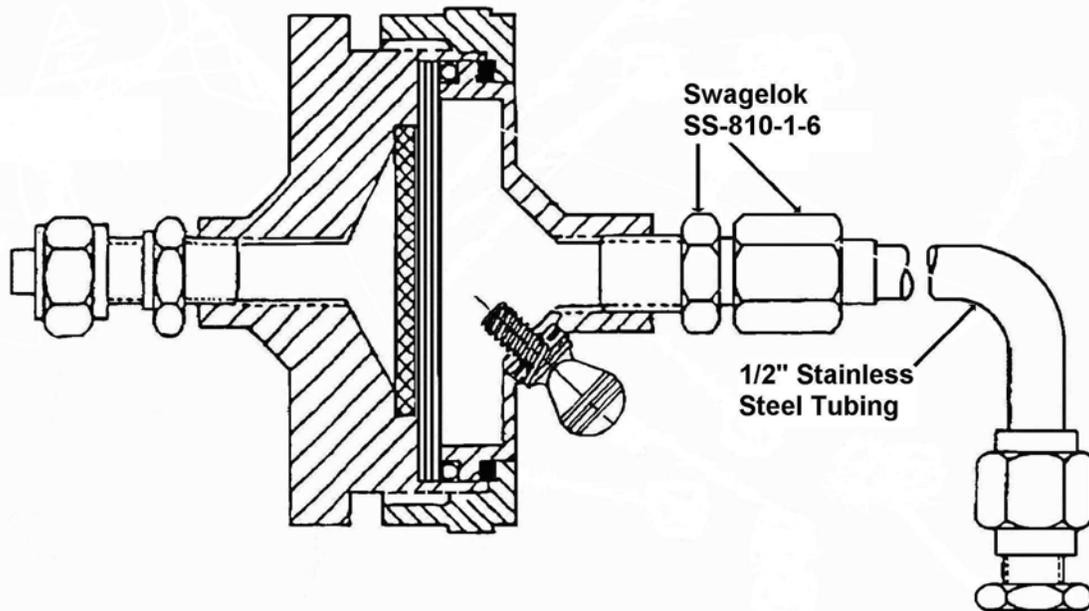


Figure 1. Filter Cryogenic Liquids

### 4.5 Containers of Type I oxygen.

4.5.1 Filling pressure. Containers shall be tested for proper filling pressure by attaching a calibrated Bourdon-tube gauge or equivalent to the valve outlet and by attaching either a thermocouple or thermometer to the container wall. The gauge shall have scale divisions not greater than 100 kPa (15 psi). If a thermometer is used, tape or putty shall be applied to the bulb to protect it from extraneous temperatures. Putty shall not be applied between the bulb and the container wall. The thermometer shall have scale divisions not greater than 1°C (2°F). The containers shall be stabilized to ambient temperature. The valve shall then be opened and the internal pressure observed on the gauge.

4.5.2 Leakage. Each Type I oxygen container shall be tested for leaks at the neck threads, stem packing, and safety device of the valve with leak-detection fluid. Valve seat leakage shall be tested by means of a tube from the valve outlet to a container of liquid.

## 5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

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### 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The propellant covered by this specification is intended for use as follows.

- a. Grade A, type I – Purging and pressurization of propellant systems and rocket engines.
- b. Grade A, type II – Oxidizer.
- c. Grade B, type II - Oxidizer.
- d. Grade F, types I and II – Fuel cell grade that may be used for crew breathing in subsystems utilizing a common storage for both functions.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Type and grade of oxygen required (see 1.2).
- c. If required, the specific issue of individual documents referenced (see 2.2.1).
- d. When other limits or tests are required (see 3.1).
- e. When the particulate test is not required (see Table I).
- f. When a variation in the points of inspection is required (see 4.1).
- g. When a variation of the quality conformance tests to be performed on each sample is required (see 4.2.4).
- h. When a variation to the sampling method is required (see 4.2.4.2).
- i. When a variation to the continuous service option is required (see 4.2.6.1).
- j. When a variation to the 400 liter criteria for sampling is required (see 4.2.7).
- k. When a variation of the analytical procedures is required (see 4.4).
- l. Packaging requirements (see 5.1 and 6.3).

6.3 Packaging requirements. Guidance for cylinders may be found in the following documents.

- |                 |   |
|-----------------|---|
| a. RR-C-901     | Cylinders, Compressed Gas: Seamless Shatterproof, High Pressure DOT 3AA Steel, and 3AL Aluminum |
| b. MIL-DTL-2/39 | Valve, Cylinder, Gas: Oxygen Outlet 540   |
| c. MIL-STD-101  | Color Code for Pipelines and for Compressed Gas Cylinders                                       |

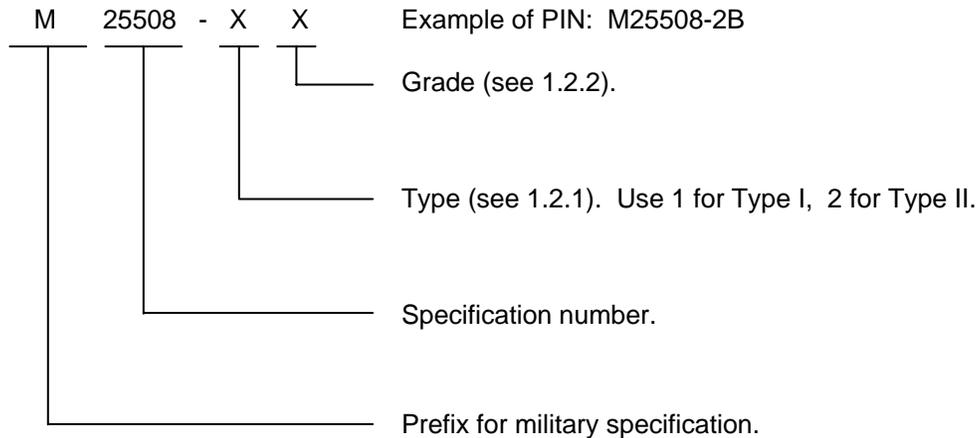
## MIL-PRF-25508G

- d. MIL-STD-1411                      Inspection and Maintenance of Compressed Gas Cylinders
- e. 49 CFR 171 – 199                Code of Federal Regulations

### 6.4 Definition.

6.4.1 Continuous service. Continuous service applies to continuous deliveries under Government contract of oxygen complying with the quality conformance tests specified herein.

6.5 Part or identifying number (PIN). The PIN's to be used for oxygen acquired to this specification are created as follows:



### 6.6 Subject term (key word) listing.

- Aerospace
- Breathing
- Cryogenic
- Cylinders
- Fuel cell
- Space vehicle

6.7 Infrared analysis. Procedures for calibration and analysis may be found in MIL-STD-1564, Procedure for Calibration and Analysis of Trace Contaminants in Aviator's Breathing Oxygen by Infrared Spectroscopy.

6.8 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

## MIL-PRF-25508G

Custodians:

Army – MI  
Navy – AS  
Air Force – 68  
DLA – PS

Preparing activity:

Air Force – 68  
(Project 9135-2005-007)

Review activities:

Air Force – 19  
DLIS – LS

Civil Agencies:

NASA

Note: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information using the ASSIST Online database at <http://assist.daps.dla.mil>.

METRIC

MIL-PRF-27401F

10 January 2008

SUPERSEDING

MIL-PRF-27401E

23 February 2007

## PERFORMANCE SPECIFICATION

### PROPELLANT PRESSURIZING AGENT, NITROGEN

This specification is approved for use by all Departments and Agencies of the Department of Defense.

Comments, suggestions, or questions on this document should be addressed to HQ-AFPET/AFTT, 2430 C Street, Bldg 70, Area B, Wright-Patterson AFB OH 45433-7632 or e-mailed to [AFPET.AFTT@wpafb.af.mil](mailto:AFPET.AFTT@wpafb.af.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

AMSC N/A

FSC 9135

**DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.**

# MIL-PRF-27401F

## 1. SCOPE

1.1 Scope. This specification covers the requirements for three grades and two types of nitrogen.

1.2 Classification. The nitrogen will be of the following types and grades as specified (see 6.2).

1.2.1 Types. The types of nitrogen are as follows:

Type I - Gaseous

Type II - Liquid

1.2.2 Grades. The grades of nitrogen are as follows:

Grade A - 99.5 percent pure, aerospace practices

Grade B - 99.99 percent pure, space vehicle and cabin environment

Grade C - 99.995 percent pure, special applications

## 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specification forms a part of this document to the extent specified herein. Unless otherwise specified, the issue of this document is the one cited in the solicitation or contract (see 6.2).

### COMMERCIAL ITEM DESCRIPTIONS

A-A-58092 Tape, Antiseize, Polytetrafluorethylene

(Copies of this document is available online at <http://assist.daps.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Bldg 4D, Philadelphia PA 19111-5094.)

2.3 Non-government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

### ASTM INTERNATIONAL

ASTM E 29 Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

ASTM F 307 Standard Practice for Sampling Pressurized Gas for Gas Analysis

ASTM F 310 Standard Practice for Sampling Cryogenic Aerospace Fluids

# MIL-PRF-27401F

(Copies of these documents are available online at <http://www.astm.org> or by mail at ASTM International, 100 Barr Harbor Drive, West Conshohocken PA 19428-2959)

## COMPRESSED GAS ASSOCIATION (CGA)

CGA G-10.1	Commodity Specification for Nitrogen
CGA P-15	Filling of Industrial and Medical Nonflammable Compressed Gas Cylinders

(Copies of these documents are available online at <http://www.cganet.com> or by mail from the Compressed Gas Association, Inc., 4221 Walney Road, 5<sup>th</sup> floor, Chantilly, VA 20151-2923)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 3. REQUIREMENTS

3.1 Grade requirements. The purity and impurity concentrations as applicable to each grade of nitrogen shall conform to the limits of Table I when tested in accordance with the applicable test method also specified in Table I. Other limits and tests may be specified by the procuring activity (see 6.2).

3.2 Limiting values. The following applies to all specified limits in this specification: For purposes of determining conformance with these requirements, an observed value or a calculated value shall be rounded off "to the nearest unit" in the last right-hand digit used in expressing the specification limit according to the rounding-off method of ASTM E 29 Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications.

#### 3.3 Filter.

3.3.1 Containers. A filter with a rating of at least 10-micrometer nominal and 40-micrometer absolute rating shall be installed between the manufacturer's plant system and the manifold used to fill the gas or liquid containers for delivery.

3.3.2 Pipelines. A filter with a rating of at least 3.5-micrometer nominal and 12-micrometer absolute rating shall be installed downstream of compressors and/or converters and as close to the user's interface as possible for delivery into pipelines. The filter shall remove all particles greater than 100 micrometers in any dimension.

#### 3.4 Filled containers (Type I only).

3.4.1 Pressure. The filling pressure for tube trailers shall not differ from that required by the contract by more than 1% at 70°F when tested as specified in 4.5.1. Cylinders shall be filled to within 99 to 100 percent of their rated service pressure when tested as specified in 4.5.1. In no case shall the filling pressure exceed the rated service pressure of the container. Pressure-Temperature Filling Chart in CGA P-15 may be used.

3.4.2 Leakage. Containers shall not leak when tested according to 4.5.2.

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**TABLE I. Grade limits for nitrogen.**

	Grade			Test Method
	A	B	C	
Purity <sup>a, b</sup> , % by vol, min	99.5	99.99	99.995	4.4.1
Impurities, ppm by volume, max	5000	100	50	Note c
Water	26.3	11.5	5.7	4.4.2
Total hydrocarbons as methane	58.3	5.0	5.0	4.4.2
Oxygen	5000	50	20	4.4.2
Hydrogen	Note d	Note d	0.5	4.4.2
Argon <sup>e</sup>	Note d	20	2	4.4.2
Carbon dioxide <sup>e</sup>	Note d	5	5	4.4.2
Carbon monoxide <sup>e</sup>	Note d	5	5	4.4.2
Particulate <sup>f</sup> , mg/L, max	1.0	1.0	1.0	4.4.3

**Notes.**

- a. Percent nitrogen includes trace quantities of neon, helium, and argon.
- b. If direct method is required, use the alternate method found in 6.3.
- c. Sum, in parts per million (ppm), of water, hydrocarbons, oxygen, and, if applicable hydrogen, carbon monoxide, and carbon dioxide.
- d. No limit for this grade.
- e. If required by contract (see 6.2).
- f. Applies only to Type II (Liquid) nitrogen. The particulate limit may be removed by the procuring activity (see 6.2).

## 4. VERIFICATION

### 4.1 Points of inspection (see 6.2).

4.1.1 Containers. Unless otherwise specified, acceptance tests shall be conducted at the site of filling prior to shipment or departure.

4.1.2 Pipeline. When Type I nitrogen is delivered in pipeline, acceptance tests shall be conducted immediately prior to entering the user's system.

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4.2 Conformance inspection. Quality conformance tests shall consist of the following:

- a. Individual tests (Type I only)..... 4.2.1
- b. Sampling tests ..... 4.2.2

4.2.1 Individual tests (Type I only). Each container shall be subjected to the following tests as described under 4.5:

- a. Filling pressure ..... 4.5.1
- b. Leakage ..... 4.5.2

4.2.2 Sampling test. The number of nitrogen containers shall be selected in accordance with Table II and subjected to the tests required by Table I.

**TABLE II. Sampling for test.**

Number of containers in lot	Number of containers to be sampled
1	1
2 – 40	2
41 – 70	3
71 – over	4

4.2.3 Lot definitions.

4.2.3.1 Type I. A lot is defined as all of the nitrogen supplied in one or more container(s) filled from a single manifold at the same time.

4.2.3.2 Type II. Each filled container shall constitute a lot.

4.2.3.3 Container Assemblies. A shipping conveyance consisting of multiple cylinders or tubes that are interconnected by a single manifold that equalizes the pressure across all cylinders/tubes to form a single unit is considered a single container for the purpose of this specification.

4.2.4 Sample. Each sample shall be of sufficient size to conduct all the quality conformance tests as specified herein. Unless otherwise specified, the quality conformance tests shall be performed on each required sample (see 6.2). When required, an equivalent sample shall be forwarded to a laboratory designated by the procuring activity for testing.

4.2.4.1 Sampling methods. Each sample taken for analysis shall be representative of the entire contents of the container being sampled. All equipment used shall be made of suitable materials. Unless otherwise specified in the acquisition requirements (see 6.2), sampling shall be accomplished by one of the following methods.

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a. Type I, gaseous nitrogen may be sampled in accordance with ASTM F 307 and Type II, liquid nitrogen may be sampled in accordance with ASTM F 310. It is critical that the outlet of the sampling port be clean and free of contaminants.

b. Connect the shipping container being sampled directly to the analytical equipment using suitable pressure regulation as required to prevent over-pressurization of the equipment.

4.2.5 Non-Bulk Containers. Non-bulk containers are defined as containers of 400 liters or less water capacity. The number of containers filled with Type I (gaseous) nitrogen selected for sampling from each lot shall be in accordance with Table II. The first and last containers to be filled within a given lot are typically sampled. Other samples may be selected at random. Every container filled with Type II (liquid) nitrogen shall constitute a lot and will be sampled.

4.2.6 Bulk transports. Bulk containers are defined as containers of more than 400 liters water capacity. Each bulk container filled with Type I (gaseous) or Type II (liquid) nitrogen constitute a lot and shall be sampled.

4.2.6.1 Continuous service (see 6.6.1). Unless otherwise specified by the procuring activity, the following sample option for nitrogen shall be used for storage and transport tanks engaged in continuous nitrogen service (see 6.2). Contractor shall sample the contents of each transport tank engaged in continuous nitrogen service at least once every seven days at uniform intervals of time. Samples shall be taken from the filled transport tanks. Contractor shall sample the contents of each transport tank when entering continuous service and when the transport tank has remained empty for a period greater than 24 hours. When empty, all ports and vents shall remain closed to the atmosphere. While in continuous service, compliance with quality conformance tests specified herein shall be determined by sampling the filling point storage tank after each addition or, in case of continuous production, at established intervals not less frequent than once every 24 hours. When a storage tank is being filled during a change of duty shift, sampling shall be performed after filling.

4.2.7 Pipelines. Unless otherwise specified in the contract, the following sampling plan shall be used for pipelines: Sampling to determine specification compliance shall be accomplished by drawing liquid phase samples from each filled container transporting liquid for conversion to gas and by drawing samples from the gas supplied into the user's system (see 6.2).

4.2.7.1 Liquid phase samples. Liquid phase samples shall be tested for each parameter in applicable grade of Type II nitrogen. Sampling under the "continuous service" provisions can be applied.

4.2.7.2 Gas phase samples.

a. Samples shall be tested for each parameter in the applicable grade of Type I nitrogen. Samples shall be drawn in accordance with 4.2.4 from a point immediately prior to entering the user's system. The frequency of sampling shall not be less than once every seven days at regular intervals.

b. When specified in contract, in-line samples shall be drawn and tested with continuous monitors for each parameter specified in contract for the applicable grade of Type I nitrogen. Each analyzer shall be equipped with a permanent recording device. When specified in contract, an alarm system to indicate contaminant contents in excess of specified maximum shall be provided (see 6.2).

c. After internal exposure of the pipeline to the atmosphere or other foreign materials, a sample of gas shall be taken from the pipeline prior to delivery into the user's system at a point between the final filter and the interface with the Government system. The sample shall be tested for each parameter in applicable grade of Type I nitrogen. After cleaning operation, the sample shall also be tested for contamination by vapors from the cleaning materials.

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4.3 Rejection. When any sample tested in accordance with 4.4 fails to conform to the requirements specified herein, the entire lot represented by the sample shall be rejected.

4.4 Analytical procedures. Unless otherwise specified, samples shall be analyzed according to the procedures described in 4.4.2 (see 6.2). Calibration gas standards may be required to calibrate (zero and span) analytical instruments used to determine the purity and impurity contents of the nitrogen. The accuracy of the calibration gas standards is to be traceable to the National Institute of Standards and Technology.

4.4.1 Nitrogen content. The nitrogen content in percent shall be found by determining the aggregate impurities by the methods described in 4.4.2. The nitrogen purity is the value obtained when the aggregate impurities, expressed as volume percent, is subtracted from 100 percent.

4.4.2 Impurities. Methods shall be selected from those of CGA G-10.1.

4.4.3 Particulate content. A filter holder assembly, (Pall Life Sciences part number 2220), or equivalent modified as shown in Figure 1 shall be attached to the withdrawal line of the vessel to be utilized to fill the tanks. A preweighed filter paper (47 mm glass fiber paper, type A/E or equivalent) shall be placed on top of another filter of the same kind. The filters shall then be placed on the porous filter support, which, in turn, shall be placed in the filter holder as shown in Figure 1. The male threads of the filter holder shall be wrapped with thin, nonadhesive-backed polytetrafluorethylene tape A-A-58092 or equivalent to prevent galling of the threads. The holder shall be tightened by hand as tight as possible to prevent bypassing of the filter element. The discharge liquid from the filter housing shall be collected in a clean, uninsulated, ambient temperature vessel marked to indicate when 5 liters of liquid have been collected. The liquid flow shall be terminated when 5 liters of liquid have been collected. The filter holder shall be removed from the line and permitted to reach ambient temperature. The warmup to ambient temperature may be expedited by use of an oven or other heat source. Care shall be exercised to ensure that any airflow which enters the unit will be directed through the inlet of the assembly to prevent displacing any particles from the surface of the filter. Upon warmup, the other side of the holder shall be wiped with a clean cloth and the holder then disassembled. The filter paper shall be closely inspected. The test shall be repeated if evidence of either (a) the filter not being securely clamped by uniform depression of its edge; (b) the filter having been cut by the holder; or (c) when dirt particles are detected in the clamped area indicating bypassing had been encountered. The test shall also be repeated when either the bottom filter shows any discoloration or when leakage of liquid from the filter holder is detected. Upon completion of a valid test the filter shall be removed from the housing and weighed to the nearest 0.1 mg.

4.5 Containers of Type I nitrogen.

4.5.1 Filling pressure. Containers shall be tested for proper filling pressure by attaching a calibrated Bourdon-tube gauge or equivalent to the valve outlet and by attaching either a thermocouple or thermometer to the container wall. The gauge shall have scale divisions not greater than 100 kPa (15 psi). If a thermometer is used, tape or putty shall be applied to the bulb to protect it from extraneous temperatures. Putty shall not be applied between the bulb and the container wall. The thermometer shall have scale divisions not greater than 1°C (2°F). The containers shall be stabilized to ambient temperature. Then the valve shall be opened and the internal pressure observed on the gauge. If the internal pressure differs from the applicable pressure value by more than 100 kPa (15 psi), the container, and all other containers filled from the same manifold at the same time shall be rejected.

4.5.2 Leakage. Each Type I nitrogen container shall be tested for leaks at the neck threads, stem packing, and safety device of the valve with leak-detection fluid. Valve seat leakage shall be tested after filling has been completed by connecting a hose to the valve outlet and placing the other end of the hose under the surface of a liquid.

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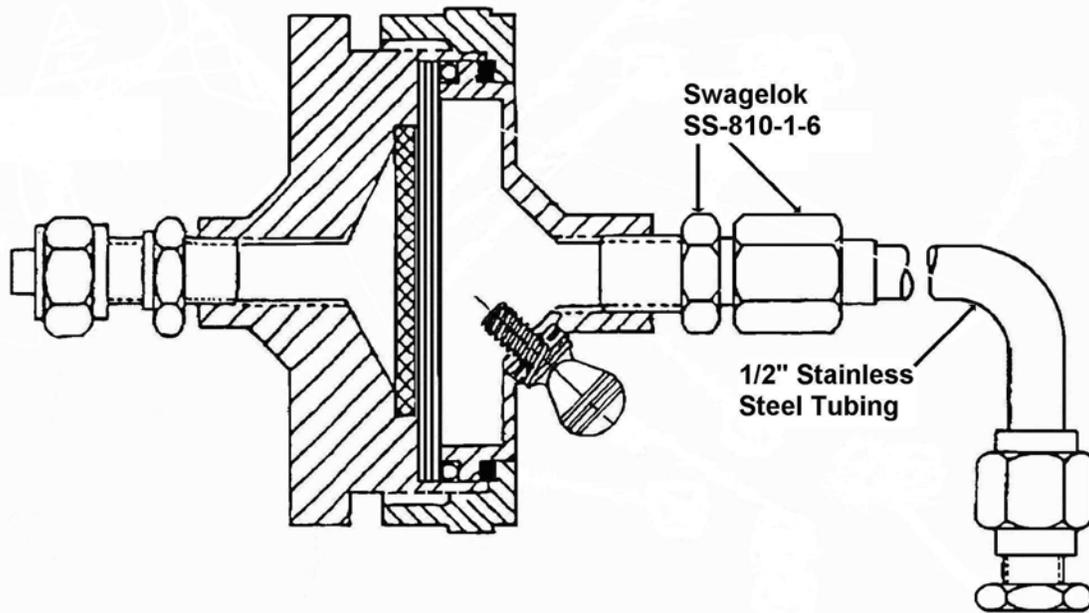


FIGURE 1. Filter, Cryogenic Liquids

## 5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

## 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The nitrogen covered by this specification is intended as a purging and pressurizing medium for rocket propellant systems, space vehicles and support equipment and for preparing oxygen-nitrogen mixtures for breathing purposes on board space vehicles (see 1.2.2).

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6.2 Acquisition requirements. Acquisition documents must specify the following:

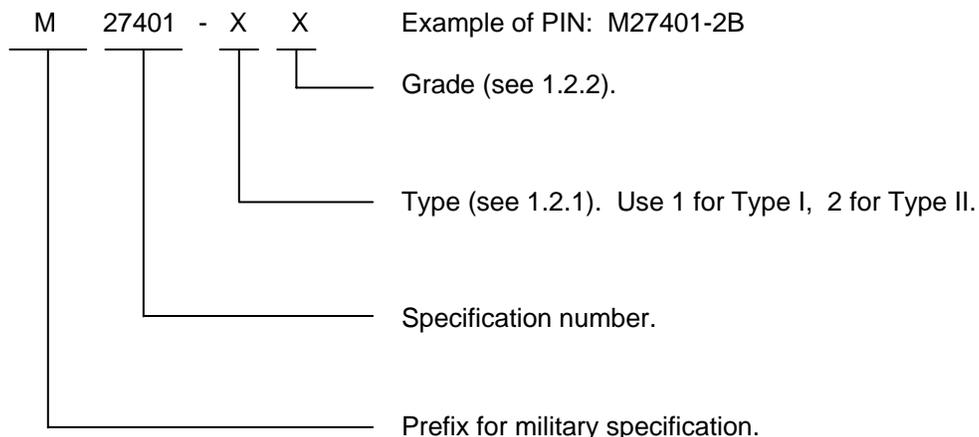
- a. Title, number, and date of this specification.
- b. Type and grade of nitrogen required (see 1.2).
- c. If required, the specific issue of individual documents referenced (see 2.2.1).
- d. When other limits or tests are required (see 3.1).
- e. When testing for argon, carbon dioxide, or carbon monoxide is required (see Table I, Note e).
- f. When the particulate test is not required (see Table I, Note f).
- g. When a variation in the points of inspection is required (see 4.1).
- h. When a variation of the quality conformance tests to be performed on a sample is required (see 4.2.4).
- i. When a variation to the sampling method is required (see 4.2.4.1).
- j. When a variation to the continuous service option is required (see 4.2.6.1).
- k. When a variation to the sampling plan for pipelines is required (see 4.2.7).
- l. When an alarm system to warn of contaminants in pipelines is required (see 4.2.7.2.b).
- m. When a variation of the analytical procedures is required (see 4.4).
- n. Packaging requirements (see 5.1).
- o. When color coding of pipeline is required (see 6.4.c).

6.3 Direct nitrogen method. When required one of the following methods shall be used to determine the nitrogen content directly. (1) The gas chromatographic method which uses a 5Å molecular sieve column and measures the peak height versus retention time. (2) The mass spectrometric method which measures nitrogen at an atomic mass unit (amu) of 28. Carbon monoxide also has an amu of 28 but it can be determined by other methods.

6.4 Packaging requirements. Guidance for cylinders may be found in the following documents:

- |                     |   |
|---------------------|---|
| a. RR-C-901         | Cylinders, Compressed Gas: Seamless Shatterproof, High Pressure DOT 3AA Steel, and 3AL Aluminum |
| b. MIL-DTL-2/11     | Valve, Cylinder, Gas, Argon, Helium, Nitrogen, Neon, and Xenon, (Inert-Oil Free), Outlet 580    |
| c. MIL-STD-101      | Color Code for Pipelines and for Compressed Gas Cylinders                                       |
| d. MIL-STD-1411     | Inspection and Maintenance of Compressed Gas Cylinders  |
| e. 49 CFR 171 – 199 | Code of Federal Regulations   |

6.5 Part or identifying number. The PINs to be used for nitrogen acquired to this specification are created as follows:



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## 6.6 Definition.

6.6.1 Continuous service. Continuous service applies to continuous deliveries under Government contract of nitrogen complying with the quality conformance tests specified herein.

## 6.7 Subject term (key word) listing.

Aerospace  
Cryogenic  
Cylinders  
Pipeline  
Space vehicle

6.8 Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

### Custodians:

Army – MI  
Navy – AS  
Air Force – 68  
DLA – PS

### Preparing activity:

Air Force – 68  
(Project 9135-2007-003)

### Review activities:

Air Force – 19  
Air Force – 11

### Civil Agency:

NASA – NA

Note: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information using the ASSIST Online database at <http://assist.daps.dla.mil>.

ATTACHMENT 3

TRANSPORT EQUIPMENT DELAY CERTIFICATE				
1. CONSIGNOR	2. CONSIGNEE		3. PRODUCT	
4. CARRIER		5. TRAILER NUMBER		6. DATE SHIPPED
7. FREIGHT BILL NUMBER		8. GBL NUMBER		9. SEAL NUMBER
10. LOADING/UNLOADING INFORMATION				
	DATE RECEIVED	TIME	DATE RECEIVED	TIME
A. ARRIVED			O. FINISH	
ACCEPTED FOR B. LOADING/UNLOADING			E. UNIT RELEASED	
C. START			F. TOTAL HOUR HELD	
11. REASON FOR DELAY <i>(Make a complete statement adequately describing each segment of delay, amount of time on each delay, and whether delay was responsibility of carrier or consignee/consignor)</i>				
12. DETENTION CERTIFICATION STATEMENT: I certify that the above information is true and correct to the best of my knowledge.				
SIGNATURE AND TITLE OF CONSIGNEE		SIGNATURE AND TITLE OF SHIPPER		SIGNATURE OF DRIVER
13. NOTE TO CARRIER: A copy of "Vehicle Delay Certificate" must accompany each detention invoice to provide documentation for invoice certification and payment.				

ATTACHMENT 4  
**CONTRACTOR PERFORMANCE DATA SHEET**

Please submit the requested information for government and non-government contracts or subcontracts held (not to exceed 3 years since completion) for contracts that are similar to the requirements of this solicitation. Those contracts and/or subcontracts submitted may include those still in progress, however they should have a minimum of one year's performance history.

Please mark this box if you have not performed under contracts that are similar in nature to the solicitation requirements.

COMPANY NAME	POINT OF CONTACT	PHONE NUMBER	FAX NUMBER	PRODUCT SUPPLIED	QTY	METHOD OF DELIVERY	PLACE OF PERFORMANCE	PERIOD OF PERFORMANCE	SUBCONTRACTING PLAN (YES OR NO)