

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING DO-A7	PAGE OF PAGES 1 71		
2. CONTRACT (Proc. Inst. Ident.) NO. W91CRB-10-C-0177		3. EFFECTIVE DATE 10 Aug 2010		4. REQUISITION/PURCHASE REQUEST/PROJECT NO. SEE SCHEDULE			
5. ISSUED BY US ARMY RDECOM CONTR CTR - W91CRB 4118 SUSQUEHANNA AVENUE ABERDEEN PROVING GROUND MD 21005-3013		CODE W91CRB	6. ADMINISTERED BY (If other than Item 5) DCMA SOUTHERN VIRGINIA - S5111A 190 BERNARD ROAD BUILDING 117 FORT MONROE VA 23651-1058		CODE S5111A		
7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, state and zip code) ITT CORPORATION 7635 PLANTATION RD ROANOKE VA 24019-3222			8. DELIVERY <input type="checkbox"/> FOB ORIGIN <input checked="" type="checkbox"/> OTHER (See below)		9. DISCOUNT FOR PROMPT PAYMENT Net 30 Days		
CODE 13567		FACILITY CODE 13567		10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN:			
11. SHIP TO/MARK FOR PM SOLDIER SENSORS AND LASERS (b) (6) 10170 BEACH ROAD FORT BELVOIR VA 22060		CODE W912H8	12. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER SOUTH - HQ0338 SOUTH ENTITLEMENT OPERATIONS PO BOX 182264 COLUMBUS OH 43218-2264		CODE HQ0338		
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)() <input type="checkbox"/> 41 U.S.C. 253(c)()			14. ACCOUNTING AND APPROPRIATION DATA See Schedule				
15A. ITEM NO.	15B. SUPPLIES/ SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT		
SEE SCHEDULE							
15G. TOTAL AMOUNT OF CONTRACT					\$13,823,546.00		
16. TABLE OF CONTENTS							
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE							
17. <input type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)			18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number W91CRB-09-R-0089-0011 including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.				
19A. NAME AND TITLE OF SIGNER (Type or print)			20A. NAME OF CONTRACTING OFFICER SUSAN A. GREIDER / CONTRACTING OFFICER TEL: 410-278-0872 EMAIL: Susan.Greider@us.army.mil				
19B. NAME OF CONTRACTOR		19C. DATE SIGNED	20B. UNITED STATES OF AMERICA		20C. DATE SIGNED		
BY _____ (Signature of person authorized to sign)			BY <i>Susan A. Greider</i> (Signature of Contracting Officer)		10-Aug-2010		

Section B - Supplies or Services and Prices

SECTION B

This acquisition is being conducted under FAR Part 15. This is not a commercial acquisition under FAR Part 12.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001	PY1 ENVG(O) Requirements FFP Program Year (PY) 1 ENVG Requirements. PURCHASE REQUEST NUMBER: W9123120093170				\$0.00
NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001AA	ENVG(O) Test Articles FFP PY1 ENVG(O) Test Articles. Contractor shall deliver test articles in accordance with para 3.2 of SOW. Pricing includes warranty cost. FOB: Origin PURCHASE REQUEST NUMBER: W9123120108029	220	Each	(b) (4)	
NET AMT					(b) (4)
ACRN AA CIN: W91231201080291001AA					

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001AB	REMOVED FFP FOB: Origin PURCHASE REQUEST NUMBER: W9123120093170				\$0.00

NET AMT \$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001AC	PY1 CDRLS - Mandatory FFP Contractor shall provide mandatory Contract Data Requirements List in accordance with Statement of Work and Exhibit A. Pricing for CDRLs is in accordance with CDRL Pricing - BASE YEAR in Section C. Pricing for CDRLs listed as Not Separately Priced (NSP) is included in unit price of Test Articles. FOB: Destination PURCHASE REQUEST NUMBER: W9123120108029	1	Lot	(b) (4)	

NET AMT (b) (4)

ACRN AA
CIN: W91231201080291001AC

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1002 OPTION	PY1 CDRLS - Optional FFP Contractor shall provide LCCS support in lieu of Organic Maintenance, therefore there are no optional CDRLs. FOB: Destination PURCHASE REQUEST NUMBER: W9123120093170		Lot		\$0.00

NET AMT \$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1003 OPTION	PY1 TMDE Test Sets FFP Contractor shall provide LCCS support in lieu of Organic Maintenance, therefore this CLIN is not priced. FOB: Origin PURCHASE REQUEST NUMBER: W9123120093170		Each		\$0.00

NET AMT \$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1004 OPTION	PY1 ENVG(O) Maintenance Support FFP	1	Lot	(b) (4)	(b) (4)

The Government may exercise the option to procure the maintenance support as proposed by Contractor for PY1 in accordance with para. 3.3.2 of the SOW. The type of maintenance is LCCS and will be utilized only when authorized in advance by the Contracting Officer.

All necessary materials will be provided as GFE via the corresponding Program Year Spares CLIN.

Labor Repair Charge for each repair at the respective Program Year rate as follows:

PY1: (b) (4)
 PY2: (b) (4)
 PY3: (b) (4)

FOB: Origin

PURCHASE REQUEST NUMBER: W9123120093170

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1005 OPTION	PY1 Spares FFP	1	Lot	(b) (4)	(b) (4)

The Government may exercise option to purchase Fielding/Sustainment Spares as defined in subline items required during PY1 in accordance with para. 3.3.11.5.2 of the SOW and priced in accordance with Attachment 1 - Spares Pricing. An estimate of (b) (4) for PY1 will be used for normalization.

FOB: Origin

PURCHASE REQUEST NUMBER: W9123120093170

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2001	PY2 ENVG(O)	4,500	Each	(b) (4)	(b) (4)

OPTION

FFP
 The Government may exercise the Option to purchase up to 4,500 ENVG(O) during Program Year 2 at prices specified in range pricing provided below. Pricing includes warranty cost.

Unit price provided is weighted average unit price per ENVG.

Qty/Range

1 - 500

501 -1000

1001-2000

2001-3500

3501-4500

FOB: Origin

PURCHASE REQUEST NUMBER: W9123120093170

(b) (4)

NET AMT

(b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2002	REMOVED	1	Each		\$0.00
	FFP				
	FOB: Destination				
	PURCHASE REQUEST NUMBER: W9123120093170				

NET AMT

\$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2003 OPTION	PY2 CDRLS - Mandatory FFP	1	Lot	(b) (4)	(b) (4)
<p>Contractor shall provide mandatory Contract Data Requirements List in accordance with Statement of Work and Exhibit A. Pricing for CDRLs is in accordance with CDRL Pricing - PY2 in Section C. Pricing for CDRLs listed as Not Separately Priced (NSP) is included in unit price of Test Articles. FOB: Destination PURCHASE REQUEST NUMBER: W9123120093170</p>					

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2004 OPTION	PY2 ENVG(O) Maintenance Support FFP	1	Lot	(b) (4)	(b) (4)
<p>The Government may exercise the option to procure the maintenance support as proposed by Contractor for PY2 in accordance with para. 3.3.2 of the SOW. The type of maintenance is LCCS and will be utilized only when authorized in advance by the Contracting Officer.</p> <p>All necessary materials will be provided as GFE via the corresponding Program Year Spares CLIN.</p> <p>Labor Repair Charge for each repair at the respective Program Year rate as follows: PY1: (b) (4) PY2: (b) (4) PY3: (b) (4) FOB: Origin PURCHASE REQUEST NUMBER: W9123120093170</p>					

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2005 OPTION	PY2 Spares FFP	1	Lot	(b) (4)	(b) (4)

The Government may exercise option to purchase Fielding/Sustainment Spares as defined in subline items required during PY2 in accordance with para. 3.3.11.5.2 of the SOW and priced in accordance with Attachment 1 - Spares Pricing. An estimate of (b) (4) for PY2 sustainment/fielding spares is used for normalization.
 FOB: Origin
 PURCHASE REQUEST NUMBER: W9123120093170

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3001 OPTION	PY3 ENVG(O) FFP	12,000	Each	(b) (4)	(b) (4)

The Government may exercise the Option to purchase up to 12,000 ENVG(O) during Program Year 3 in accordance with range pricing provided below. Unit price reflects weighted average unit price. Pricing includes warranty cost.

Range	Unit Price
1-1500	(b) (4)
1501-4000	
4001-6500	
6501-9000	
9001-12000	

FOB: Origin
 PURCHASE REQUEST NUMBER: W9123120093170

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3002	REMOVED FFP FOB: Destination PURCHASE REQUEST NUMBER: W9123120093170		Each		\$0.00
NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3003 OPTION	PY3 TMDE Test Sets FFP Contractor shall provide LCCS support in lieu of Organic Maintenance, therefore this CLIN is not priced. FOB: Origin PURCHASE REQUEST NUMBER: W9123120093170		Each		\$0.00
NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3004 OPTION	PY3 CDRLS - Mandatory FFP Contractor shall provide mandatory Contract Data Requirements List in accordance with Statement of Work and Exhibit A. Pricing for CDRLs is in accordance with CDRL Pricing - PY3 in Section C. Pricing for CDRLs listed as Not Separately Priced (NSP) is included in unit price of Test Articles. FOB: Destination PURCHASE REQUEST NUMBER: W9123120093170	1	Lot	(b) (4)	(b) (4)

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3005 OPTION	PY3 CDRLS - Optional FFP The Government may exercise option to purchase Contract Data Requirements List in accordance with SOW for PY3. Pricing for CDRLs is in accordance with CDRL Pricing - PY3 in Section C. Pricing for CDRLs listed as Not Separately Pricing (NSP) is included in unit price of Test Articles. FOB: Destination PURCHASE REQUEST NUMBER: W9123120093170	1	Lot	(b) (4)	(b) (4)

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3006 OPTION	PY3 ENVG(O) Maintenance Support FFP	1	Lot	(b) (4)	(b) (4)

The Government may exercise the option to procure the maintenance support as proposed by Contractor for PY3 in accordance with para. 3.3.2 of the SOW. The type of maintenance is LCCS and will be utilized only when authorized in advance by the Contracting Officer.

All necessary materials will be provided as GFE via the corresponding Program Year Spares CLIN.

Labor Repair Charge for each repair at the respective Program Year rate as follows:

PY1: (b) (4)
 PY2: (b) (4)
 PY3: (b) (4)

FOB: Origin

PURCHASE REQUEST NUMBER: W9123120093170

NET AMT (b) (4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
3007 OPTION	PY3 Spares FFP	1	Lot	(b) (4)	(b) (4)

The Government may exercise option to purchase Fielding/Sustainment Spares as defined in subline items required during PY3 in accordance with para. 3.3.11.5.2 of the SOW and priced in accordance with Attachment 1 - Spares Pricing. An estimate of (b) (4) for PY3 sustainment/fielding spares will be used for normalization.

FOB: Origin

PURCHASE REQUEST NUMBER: W9123120093170

NET AMT (b) (4)

Section C - Descriptions and Specifications

STATEMENT OF WORK

1.0 Scope. This Statement of Work (SOW) specifies the tasks and efforts the contractor shall perform during this production contract for the Enhanced Night Vision Goggle (ENVG), ENVG associated spare parts, and if required, Test Measurement and Diagnostic Equipment (TMDE). This SOW provides the program management, quality assurance, integrated logistics support (ILS), configuration management, and safety requirements for the items being sought under this procurement. The contractor shall ensure the delivered ENVG systems comply with the requirements of the ENVG Performance Specification offered in response to the Government’s ENVG Purchase Description dated 18 MAY 2010. *Note that italicized portions of this SOW are not requirements, but rather provide additional details regarding desired enhancements.* **Note also that items in bold refer to requirements for Contract Line Item Numbers (CLINs) that become requirements if/when exercised.**

1.1 Terminology.

- 1.1.1 Government. When the term “Government” is used throughout this document, it shall refer to the cognizant personnel within PM Soldier Sensors & Lasers as well as the Procuring Contracting Officer (PCO) and his/her representatives assigned to the ENVG program.
- 1.1.2 Days. When the term “days” is used throughout this document, it shall refer to calendar days, unless explicitly specified as business days.

2.0 Applicable Documents. The following documents form a part of this SOW to the extent specified herein. Unless otherwise specified, the latest revision of each document shall apply.

2.1 Government Documents

DOD 5220.22M	National Industrial Security Program Operating Manual
MIL-DTL-14072	Finishes for Ground Based Electronic Equipment
MIL-PRF-49506	Performance Specification for Logistics Management Information
DI-CMAN-80858	Contractor’s Configuration Management Plan
MIL-HDBK-61	Configuration Management Guidance
PD-ENVG	Enhanced Night Vision Goggle Performance Specification submitted in response to Government’s ENVG Purchase Description

2.2 Non-Government Documents

ASME Y14.5M-1994	Dimensioning and Tolerancing -- Includes Inch and Metric
ASME Y14.15	Diagrams, Electrical and Electronic
ASME/ISO/ASQ Q10012-2003	Measurement Management Systems - Requirements for Measurement Processes and Measuring Equipment.
ISO 9001:2000	Quality Management Systems – Requirements

3.0 Requirements

3.1 ENVG System Description. The ENVG is a helmet-mounted device, presenting imagery from image intensification and thermal sensors simultaneously or individually to allow the individual Soldier to perform missions during all light levels and in all terrains, in clear air and degraded visibility conditions. The ENVG shall be used by Soldiers and others engaged in close combat, combat support, and combat service support operations. The thermal sensor allows the Soldier to rapidly detect targets under all light levels and battlefield conditions, while the image intensifier sensor allows the Soldier to see detail and to use rifle mounted aiming lasers. The combination of the two sensors shall significantly improve Soldier situational awareness. Other jobs performed by Soldiers wearing ENVG will include driving vehicles, performing operator maintenance, combat lifesaving, and other missions required of Soldiers involved in close combat.

3.1 Program Management

3.1.1 Program Management Objective. The objective of program management under this contract is to provide both the contractor and the Government with a common set of information/tools required to effectively manage the work performed under this contract, minimize system performance risk, and ensure adherence to the established program schedule.

3.1.2 Integrated Program Master Schedule (IPMS). The objective of the IPMS is to provide a tool that provides sufficient detail and insight to allow the ENVG Integrated Product & Process Team (IPPT) to track the progress of the program. The initial submission shall be included as part of the offeror's proposal. All tasks/activities in the IPMS should be logically linked, showing predecessor/successor relationships, and critical path. The activities and tasks defined should be sufficient to account for the entire program under contract, and as a minimum, integrate all required data items, testing, hardware deliverables, and major contract program events/reviews, and program events requiring Government participation. The IPMS is CDRL/DID-001.

3.1.3 Risk Management/Mitigation Plan. The contractor shall use a risk management/mitigation document plan for the IPPT to document, track, and manage areas of program risk during the life of the contract. The initial submission shall be included as part of the proposal. The risk management/mitigation plan shall include, but is not limited to the following: risk description, rating (stoplight or low, medium, high), program impact, mitigation strategy, action officer, schedule, and status. The Risk Management/Mitigation Document plan is CDRL/DID-002.

3.1.4 Integrated Product & Process Team (IPPT).

3.1.4.1 IPPT Overview. The Government and contractor shall incorporate an IPPT discipline into the ENVG production effort. The objectives of the IPPT are to foster an open, shared data/information environment and to implement a disciplined systems engineering approach to influence the design, manufacturing, testing, logistics support, and on-schedule delivery of specification compliant units, while striving to continuously improve the various Government/contractor processes and reduce system life cycle cost. The IPPT shall also complete the following additional actions throughout the life of the contract:

- 3.1.4.1.1 Hold IPPT reviews;
- 3.1.4.1.2 Use risk management techniques to document, track, and manage program areas of risk;
- 3.1.4.1.3 Review/concur on program documentation;
- 3.1.4.1.4 Review follow-on qualification testing with the goal of reducing repetitive testing;
- 3.1.4.1.5 Review/concur on all Failed Item Analysis Reports (FIARs)/Engineering Change Proposals (ECPs)/Waivers/Deviations/Trades;
- 3.1.4.1.6 Generate and update IPMS.

3.1.4.2 IPPT Membership. The IPPT shall consist of Government and contractor personnel associated with the ENVG program and related efforts. The U.S. Army ENVG Assistant Product Manager will co-chair the IPPT with the associated contractor counterpart. The IPPT chairpersons will work in good faith to reach agreement on all items requiring IPPT approval/concurrence. If agreement cannot be reached between the co-chairpersons, then the issue(s) will be escalated per each organization's chain of command. The co-chairs shall define the membership of the IPPT at the Post Award Conference.

3.1.5 Plans, Reports, Reviews, & Meetings. The IPPT co-chairs will develop an agenda for all reviews/meetings. The contractor shall provide an agenda and a read-ahead brief for all meetings/reviews no later than 2 business days before the scheduled review/meeting. The agenda and read-ahead briefing is CDRL-003. At the end of each review/meeting, the contractor and Government shall jointly prepare action items and meeting minutes. The action items list and the meeting minutes are CDRL-004. The contractor shall schedule (with Government concurrence), prepare for, and conduct the following reviews/meetings:

3.1.5.1 Not Used

3.1.5.2 IPPT Reviews. The contractor shall participate and support IPPT Reviews at approximately 90-day intervals throughout the life of the contract, or as agreed to by the IPPT chairpersons. The first IPPT Review shall

be conducted on or about 45 days after the Post Award Conference. IPPT reviews may be conducted as teleconferences or video-teleconferences (VTCs) if mutually agreed upon by the IPPT co-chairpersons, however face-to-face meetings are preferred to be at the contractor's facility. IPPT reviews shall provide a working level forum to identify, discuss, and resolve issues that could affect the system performance, design, production, testing, logistics support, system deliveries, life cycle cost, and program schedule. The IPMS and Risk Mitigation Document shall also be reviewed at these meetings.

3.1.5.3 Informal Reviews. The contractor shall be available for informal reviews and Government visits in addition to the IPPT reviews. The IPPT co-chairs will, whenever possible, attempt to minimize travel costs for both parties by utilizing teleconferences or VTCs to conduct these informal reviews.

3.1.5.4 Post Award Conference/Preliminary Design Review/Critical Design Review/Production Readiness Review (PAC/PDR/CDR/PRR). The contractor shall host a Post Award Conference within 15 days of contract award to ensure there is a mutual understanding of the terms, conditions, and requirements among all parties responsible for the management and performance of the contract. The contractor shall host a PDR within 45 days of contract award to provide a preliminary assessment of the design of the ENVG. A CDR shall be hosted by the contractor no more than 30 days following the PDR to review the final design in preparation for initial production. An initial PRR shall be hosted by the contractor no more than 150 days after contract award. A final PRR shall be hosted by the contractor no more than 4 months after the IOT. The PRRs shall review the contractor's production readiness to meet the requirements of the contract. Exit criteria for the various reviews includes, but is not limited to:

3.1.5.4.1 Post Award Conference Exit Criteria. IPPT agreement on the following:

- a. Contract terms, conditions, and requirements.

3.1.5.4.2 Preliminary Design Review Exit Criteria. Government approval the contractor has accomplished/verified the following:

- a. Technical effort and design indicate operational test success (effective, suitable, and survivable)
- b. Preliminary design, as disclosed, satisfies the ENVG Performance specification.
- c. N/A
- d. Established and documented system allocated baseline to enable the design to proceed with proper configuration management
- e. Established adequate processes and metrics for the program to succeed
- f. Included human integration design factors in the overall system design
- g. Identified program risks and established risk mitigation plan
- h. Program schedule is executable (technical, cost, risk)
- i. Staffed program properly
- j. N/A

3.1.5.4.3 Critical Design Review Exit Criteria. Same as Preliminary Design Review Exit Criteria (3.1.5.4.2).

3.1.5.4.4 Production Readiness Review Exit Criteria. For both the initial and final Production Readiness Reviews, Government approval the contractor has accomplished/verified the following:

- a. Design is ready for production
- b. No unacceptable risks (cost, schedule, performance) exist for prime and subs
- c. Established and documented system product baseline to enable initial production to proceed with proper configuration management.
- d. Identified production risks and established mitigation plan
- e. Established adequate processes and metrics for the program to succeed
- f. Program schedule is executable (technical, cost, risk)
- g. Staffed program properly
- h. Design is producible within the production budget

Government approval of the Final Production Readiness Review is required for Type Classification—Standard.

3.1.5.5 System Engineering Plan. The contractor shall prepare a System Engineering Plan (SEP) that describes the contractor's processes and resources to incorporate System Engineering practices to build, test, deliver, and support the ENVG. The SEP shall include, but is not limited to the following:

3.1.5.5.1 Discussion of main ENVG components (monocular, helmet mount, helmet mount wiring assembly, battery pack, etc.) and primary system sub-components (image intensification sensor, thermal sensor, display, optics)

3.1.5.5.2 System performance to be achieved including KPPs, to include a system and component/sub-component power allowance table

3.1.5.5.3 Interface/Interoperability with other equipment (helmet, TWS, aiming lasers, TMDE (If applicable))

3.1.5.5.4 Contractor's System Engineering (SE) organizational integration (technical, Quality & Test, logistics), including sub-contractors

3.1.5.5.5 Contractor's SE approach to the following topics for the system and components/sub-components: reliability, maintainability/supportability, NBC, EMI, Safety/Environmental, HFE, producibility, Quality & Test, training

3.1.5.5.6 System technical risk management (technical, schedule, cost)

The SEP is CDRL/DID-006.

3.1.6 Correspondence Transmission. The contractor shall submit, as a minimum, written program correspondence or documentation via electronic submittal. The preferred method of file submission is via email. Alternative correspondence submittal procedures may be allowed on a case-by-case basis, with Government concurrence (either Government IPPT chairperson(s) or Government contracting officer).

3.1.7 Data Submissions.

3.1.7.1 Data Requirements. The data items shall be submitted to the Government via electronic media. The electronic format shall be compatible with Microsoft Office 2000 for text documents, spreadsheets, and graphics presentations, and Microsoft Project 2000 for program schedules. Electronic technical manual (ETM) data shall be delivered in accordance with paragraph 3.3.7 of this statement of work.

3.1.7.2 On-Line Technical Information. It is the intent of the Government to gain on-line access to contractor maintained data, configuration files, to include drawings down to the spare parts level, and information supporting the ENVG program. The type of information to be available on-line shall be concurred to by the IPPT prior to its implementation. The most recent version of all data shall be made available within five working days of being updated. The Contractor shall allow the Government the capability of retrieving on-line all current and last-modified versions of documentation. Classified data shall be provided on magnetic or optical media. Classified data shall be handled in accordance with DOD 5220.22M and DD Form 254, Security Classification Guide, attached to the contract. Any restrictions on the use of the electronic data shall be as prescribed in the Data Rights Clause.

3.1.7.2.1 The contractor shall establish and maintain an online file sharing website (e.g., SharePoint) for the program. Access shall be strictly controlled, and granted to contractor project members per contractor internal protocols, and to Government project team members, as identified by the Government.

3.1.7.2.2 The contractor will establish a common user file management system, concurred on by the IPPT, for the website.

3.1.7.2.3 The contractor shall establish a specific file-sharing library entitled "Deliveries to the Government", containing separate, sub-files named exclusively for each contract CDRL, by CDRL number and Title. The contractor shall post all submitted CDRL drafts, government comments and CDRL final submissions in the appropriate named CDRL folder. This electronic CDRL library shall be the sole recognized file sharing point for electronic copy CDRLs for the contract. To facilitate the smooth flow of information, the Government highly encourages

establishment of a standard, comprehensive file management structure, approved by the IPPT, to support any contract file sharing arrangement.

3.1.7.2.4 The contractor shall, for all CDRLs, establish and enforce a file naming convention that requires a standard format for naming the basic submitted file, and all subsequent serial revisions/versions separately, by basic filename, serial revision/version number and date.

3.1.7.3 Copyrights & Data Rights. All publications and publication materials delivered under this contract become the property of the Government and are not subject to copyright by the contractor. At a minimum, all ENVG Interface Control Drawings and specifications delivered to the Government under this contract shall be provided with Government Purpose Rights and shall meet the requirements of paragraph and subparagraphs of 3.3.11 of this statement of work. Any violation of this requirement by the contractor will result in a penalty, including possible termination of the contract.

3.1.8. Not Used.

3.2 Quality Assurance and Test.

3.2.1 Quality Assurance Objectives. The objectives of the Quality Assurance requirements are to establish early insight into the contractor's products/processes to ensure timely deliveries which meet the system/component performance requirements, and identify early-on any issues/concerns that will impact the timeliness of the delivered product and its performance.

3.2.2 Quality System Requirements. The contractor shall establish, maintain, and operate a quality system in accordance with ISO 9001:2008, or equivalent. The contractor shall provide the Government an overview of their quality management system as tailored for the ENVG as well as their Quality Validation Plan (QVP) at the post award. Quality and reliability shall be addressed at each IPPT review, to include Statistical Process Control (SPC) and other metrics employed by the prime contractor and their major suppliers to control critical processes. The contractor shall maintain a calibration system in accordance with ANSI/NCSL Z540.3-2006, Requirements for the Calibration of Measuring and Test Equipment; ISO 10012:2003, Measurement management systems- Requirements for measurement processes and measuring equipment, or equivalent to ensure that all test/inspection, measurement, and diagnostic equipment to include all accessories and ancillary equipment are properly calibrated and identified by appropriate labeling.

3.2.2.1 Supplier Quality Management. The contractor shall be responsible to verify the quality of the work performed by suppliers, including any inspections and tests performed by the suppliers. The contractor shall describe any methods unique to this contract of supplier selection, retention, management, inspection, and test validator or other supplier controls above and beyond that which is described in the contractor's Quality System Plan (3.2.2). Suppliers of key/critical components or processes shall be identified including names and contact information of key supplier personnel. The Government reserves the right to review/audit any suppliers of key/critical components. No review/audit of any suppliers by the Government will relieve the contractor of the responsibility of managing suppliers.

3.2.2.2 Measurement standards. In addition to the basic calibration standards, for image tube testing, the contractor shall maintain not less than three each contractor-owned image tube standards. For these image tube standards, the contractor shall maintain measurement records for critical performance parameters including signal-to-noise ratio, resolution, luminance gain, equivalent background input (EBI), photocathode sensitivity, modulation transfer function (MTF), and halo. These measurements shall be made and documented on at least a quarterly basis, using actual production test and acceptance equipment, and data shall be provided to the Government at program reviews. In addition, correlation testing shall be conducted with the Government laboratory, on an as needed basis, to ensure acceptable standards are being maintained. This may require a Government visit quarterly, or additional visits if there are correlation issues, and the contractor shall measure during this visit up to three each Government-owned tube assemblies.

3.2.3 Responsibility for Inspection. The contractor shall be responsible for the performance of all inspection requirements specified herein. Except as otherwise specified elsewhere in the contract, the contractor may use his own or any other facilities, with IPPT concurrence, suitable for the performance of the inspection requirements specified herein. The Government reserves the right to audit, perform, witness, or verify any of the inspections deemed necessary to assure supplies and services conform to prescribed requirements. The contractor shall be responsible for correcting any deficiencies found during required testing in all affected contractor product.

3.2.4 Use of Government Property/Material. The contractor's quality program shall include procedures for the control, use, and maintenance of Government furnished material and property, if provided. The contractor shall report to the procuring activity any Government furnished property or material that is found damaged, malfunctioning, or otherwise unsuitable for use.

3.2.5 Use of Contractor's Inspection Equipment. The contractor's gauges, measuring, and testing devices shall be made available for use by the Government when required to determine conformance with contract requirements. If requested by the Government, the contractor's personnel shall be made available for operation of such devices and for verification of their accuracy and condition.

3.2.6 Inspection and Test Records. The contractor shall maintain complete and accurate records of all inspections and tests, and shall make those records available for review or audit by the Government upon request.

3.2.7 Quality Validation Plans (QVPs). The Contractor shall document his approach to establish and maintain control over the quality of items delivered and assure all systems meet the performance requirements in the PD, throughout the life of the contract, in the Quality Validation Plan (QVP). The Contractor shall submit the QVP using the QVP matrix provided in Appendix A of this Statement of Work (SOW) as the baseline for establishing their sample plan, sample size, and test method, and in accordance with CDRL-008. Once approved, any changes to the QVP require Government concurrence. The QVP shall document how process control will be maintained in all areas of operations, for both the contractor and its critical suppliers. Suppliers of critical components, materials, or processes shall be identified in the QVP. The Government reserves the right to review/audit both the contractor and any suppliers. No review/audit of any suppliers by the Government will relieve the contractor of its responsibility for the performance and inspection of the products or services acquired by its suppliers. Following contract award, the contractor shall submit Final QVPs for the following items:

- 3.2.7.1 ENVG system
- 3.2.7.2 Image Intensification sensor
- 3.2.7.3 Thermal sensor
- 3.2.7.4 Microdisplay
- 3.2.7.5 Helmet mount
- 3.2.7.6 Battery pack
- 3.2.7.7 System electronics (unless packaged with components 3.2.7.2, 3.2.7.3, or 3.2.7.4)
- 3.2.7.8 Test, Measurement, and Diagnostic Equipment (if required) per 3.3.3

Individual QVPs are CDRL-008 items.

3.2.8 Production Qualification Test (PQT)/First Article Test (FAT)/Acceptance Test (AT)/Conformance Inspection (CI). The contractor shall conduct PQT, FAT, AT, and CI for the ENVG and all major components as agreed by the IPPT, in accordance with the Quality Validation Plans and test procedures concurred on by the IPPT, to demonstrate conformance to all requirements of the ENVG performance specifications. PQT qualification by similarity is encouraged and requires IPPT approval. Re-qualification is required if the system or component manufacturer has not produced the contracted item within the prior 12-month period. The contractor shall notify the IPPT before any changes are made to the materials (to include suppliers) or processes utilized to manufacture the qualified ENVG system. Changes to materials, processes, procedures, equipment, and facilities may require a portion of the respective PQT to be rerun, as determined and agreed upon by the IPPT. The contractor shall host a PQT Test Readiness Review for the IPPT to ensure test objectives, methods/procedures, and scope are agreed to approximately 120 days after contract award. The PQT shall demonstrate all requirements of the ENVG Performance Specification offered in response to the Government's ENVG Purchase Description. The contractor

shall propose a sampling plan for the PQT as part of their initial QVP proposal. At a minimum, the Government recommends a similar sampling plan as outlined in Appendix A. For those performance requirements not listed in Appendix A, the contractor shall propose a logical sampling plan. The final PQT sampling plan shall be negotiated as part of the contractor's QVP. At the conclusion of each system and component PQT conducted, the contractor shall submit a PQT test report in accordance with the requirements of paragraph 3.2.8.4 of this Statement of Work. Initial qualification of the ENVG shall require successful completion of the Government witnessed PQT to include Reliability Testing, successful completion of Government conducted Developmental Testing (DT) and Operational Testing (OT), including Follow-on Testing (FOT) if required, in accordance with paragraph 3.2.8.1, as well as meeting all paragraph 3.3 (Integrated Logistics Support & MANPRINT) sub-paragraph requirements for the system and achievement of Type Classification - Standard. The contractor shall complete PQT prior to the start of Government DT/OT. If failures occur during the initial qualification of the ENVG, the contractor shall be responsible for subsequent costs associated with any design modifications, support documentation updates, and retesting actions required to successfully complete all contractor tests and all Government tests/retests. Following completion of DT/OT, the contractor shall complete a First Article Test (FAT) on Low Rate Initial Production (LRIP) systems, and shall transition to CI testing in accordance with the contractor's QVPs. At the conclusion of the FAT, the contractor shall submit an FAT test report in accordance with the requirements of paragraph 3.2.8.8 of this Statement of Work. Reduction of CI based on in-process inspection and control of processes is encouraged, but must be concurred upon by the IPPT. Upon successful completion of testing, all ENVG systems used during testing will be refurbished and/or replaced to the production configuration to a working order capable of passing Group A test (less cosmetic defects/scratches resulting from prior testing). It is intended these units shall be used for fielding.

3.2.8.1 Developmental/Operational Testing (DT/OT). The Government will conduct both DT and OT on the ENVG as part of the initial qualification process to ensure the contract requirements are satisfied both technically as well as in an operational environment. These tests are also required to obtain approval for operational use of the ENVG from the U.S. Army. DT/OT will begin after the completion of Contractor PQT. If any deficiencies are found during PQT, the contractor shall provide corrected units for use in the DT/OT, and shall conduct retest of PQT as required. The contractor shall correct all DT/OT deficiencies, conduct appropriate retest of PQT as necessary, and shall provide corrected units for continuance of test. During Government DT/OT, the contractor shall be prepared to provide on-call support at a location on or close to the test site. The contractor's rep(s) shall be able to inspect, repair, maintain, modify, perform failure analysis, consult and train the ENVG if necessary. The contractor shall provide the required number of systems along with ancillary items as required for the various test events in accordance with the following anticipated schedule in Table 3.1. DT/OT testing may encompass, but is not limited to, the elements contained in Table 3.2.

3.2.8.1.1 Reliability Growth. The ENVG system shall meet the operational environment reliability requirements of the ENVG Performance Specification submitted in response to Government's ENVG Purchase Description, prior to the start of Government OT. As shown in Table 3.1, the Government is planning for three reliability growth tests. The number of growth tests may increase or decrease depending on reliability results and the overall test schedule.

Table 3.1. Anticipated Test Schedule

<i>Event</i>	<i>Estimated Date / Location</i>	<i>Number of Systems Required</i>
Post Award Conference	15 days ARO / Contractor's Facility	0
Preliminary Design Review	45 days ARO / Contractor's Facility	0
Critical Design Review	75 days ARO / Contractor's Facility	0
PQT Test Readiness Review	120 days ARO / Contractor's Facility	0
Initial Production Readiness Review	150 days ARO / Contractor's Facility	0
Safety Assessment Report due	6 months ARO / N/A	0
Contractor PQT	6 months ARO / Contractor's Facility	66 (IAW contractor QVP)
50% Tech Manual review	7 months ARO / Contractor's Facility	2
80% Tech Manual review	8 months ARO / Contractor's Facility	2 (2 from 50% TM Review)
50% Training review	8 months ARO / Contractor's Facility	2 (2 from 50% TM Review)
Cold Region Test Center (CRTC)	10 months ARO / Fort Greely, AK (T)	15

<i>Event</i>	<i>Estimated Date / Location</i>	<i>Number of Systems Required</i>
event (KPP/Reliability Growth Test I)		
KPP Assessment/Reliability Growth Test	13 months ARO / APG, MD (T)	24
II/I&KPT/Logistics/Maintainability /MANPRINT Demonstration (LMMD)		
NBC (possibly a paper study)	13 months ARO / Dugway Proving Ground, UT	3 (possibly 0 if paper study)
Soldier Survivability	13 months ARO / WSMR, NM	4
Electromagnetic Environmental Effects (E3)/ Electromagnetic Interference (EMI)/Electromagnetic Compatibility (EMC) Test comprised of High Altitude Electromagnetic Pulse (HEMP), Personnel Electrostatic Discharge (PESD), and Helicopter Electrostatic Discharge (HESD)	13 months ARO / WSMR, NM	4
Electromagnetic Interference (EMI)	13 months ARO / WSMR, NM or APG, MD or Contractor Facility	4
Low Energy Laser Evaluation	13 months ARO / WSMR, NM	4
OTRR1 for Air Jump Test	13 months ARO / Fort Bragg, NC	0
100% Tech Manual review	13 months ARO / Contractor's Facility	2 (2 from 50% TM Review)
80% Training review	13 months ARO / Contractor's Facility	2 (2 from 50% TM Review)
Tech Manual validation	14 months ARO / Contractor's Facility	2 (2 from 50% TM Review)
100% Training review	14 months ARO / Contractor's Facility	2 (2 from 50% TM Review)
OTRR1 for Initial Operational Test (IOTIOT)	14 months ARO / TBD(T)	0
Air Jump System Support Package Component List (SSPCL) due	~14 months ARO / Fort Bragg, NC	0
Tech Manual verification	15 months ARO / TBD	2 (2 from 50% TM Review)
New Equipment Training (NET) Test Support Package (TSP) for IOT	15 months ARO / TBD	0
KPP Assessment/Reliability Growth Test III	15 months ARO / Fort Benning, GA (T)	15
OTRR2 for Air Jump Test	15 months ARO / Fort Bragg, NC (60 days prior to Air Jump)	0
IOT System Support Package Component List (SSPCL) due	16 months ARO / TBD	0
Final TSP due	16 months ARO / TBD	0
OTRR2 for IOT	~16 months ARO (60 days prior to IOT) / TBD	0
Air Jump Test Items due	~16 months ARO (30 days prior to Air Jump) / Fort Bragg, NC	24
Air Jump SSP Items due	~16 months ARO (30 days prior to Air Jump) / Fort Bragg, NC	0
IOT Test Items due	~17 months ARO (30 days prior to IOT) / TBD	40
IOT SSP Items due	~17 months ARO (30 days prior to IOT) / TBD	0
OTRR3 for Air Jump Test	~17 months ARO / Fort Bragg, NC	0
Air Jump	~17 months ARO / Fort Bragg, NC	24 (from Air Jump test items)

<i>Event</i>	<i>Estimated Date / Location</i>	<i>Number of Systems Required</i>
IOT NET (9 days)	~18 months ARO (20 days prior to IOT) / TBD	30 (from IOT test items)
IOT Pilot Test (5 days)	~18 months ARO (10 days prior to IOT) / TBD	35 (from IOT test items)
OTRR 3 for IOT	~18 months ARO (1 day prior to IOT) / TBD	0
IOT	~18 months / TBD	35 (from IOT test items)
Final Production Readiness Review	22 months ARO / Contractor's Facility	0
Follow-on Test (FOT) to IOT (if required)	23 months ARO / TBD	15
First Article Test (FAT)	24 months ARO / TBD	TBD (IAW contractor QVP)

Table 3.2. DT/OT Elements.

1	Operational Reliability (KPP5)
2	Probability of Recognition (Clear & obscured) (KPP 1)
3	System Weight (KPP2)
4	Battery life / low power indicator (KPP3)
5	Aiming light compatibility (KPP4)
6	Power-up time
7	Soldier and CIE Compatibility (existing helmets, protective masks, laser protection goggles, wind sand and dust goggles, helmet mounted MILES equipment, communication equipment (helmet mounted microphone) and other head or helmet mounted accessories, IBA, MOLLE/LBE, MOPP (1-4) gear, gloves (utility & cold weather)
8	Human Factors (manipulate all switches, knobs, and other manual controls/adjustments on the ENVG, while wearing MOPP IV gear and arctic mittens)
9	Individual Movement Techniques
10	Ventilation & fogging of lenses
11	Infrared light source
12	Visual quality of moving targets
13	Field of view
14	Focus range
15	Diopter adjustments
16	Laser Protection (KPP 6)
17	System visibility and audibility (KPP 6)

3.2.8.2 Reliability Testing. The contractor shall conduct reliability testing on the system and major components (3.2.7.1 through 3.2.7.7) as part of PQT, FAT, and on every production lot to verify continued compliance with the ENVG system reliability requirements. The contractor shall submit Production Reliability Acceptance Test (PRAT) reports for all reliability tests as specified in 3.2.8.5. Sampling of each lot shall be conducted IAW the approved QVPs. The contractor shall be prepared to institute all necessary corrective actions to bring the systems into reliability compliance at no additional cost to the Government, to include all units delivered since the last previously successful reliability test as determined by the Government. Demonstration of reliability compliance following institution of corrective actions shall be conducted by the contractor at no additional expense

to the Government. The Government shall assess reliability growth with targets tests and demonstrated values as identified in Table 3.3. The table includes the baseline reliability assessment as conducted in the PQT as outlined in paragraph 3.2.8 and the QVP; it also includes a placeholder for PQT contractor reliability test for corrective action (CA) verification, which may be required for verification of deficiencies as found in DT/OT testing, per 3.2.8.1. The contractor is required to demonstrate the ENVG system specified reliability as a point estimate during the initial PQT, and with 80% confidence during any subsequent PQT, FAT, or PRAT. The ENVG system is required to demonstrate 250 hours mean time between essential function failure (MTBEFF) and 360 hours mean time between system abort (MTBSA) with 80% confidence in the IOT.

Table 3.3 – Planned Reliability Growth Targets

Test Phase	Operating hours	Cumulative operating hrs	MTBEFF point estimate
PQT Contractor – Baseline	750 min	750	100
Cold Regions Test Center – RGT I	1,800	2,550	152
PQT Contractor – CA Verification	1,500 min	4,050	246
KPP Assessment – RGT II	1,800	5,850	302
RGT III	1,800	7,650	354
IOT	2,000	9,650	393

3.2.8.3 Test Procedures. The contractor shall prepare and submit to the IPPT, for concurrence Test Procedures for PQT, FAT, AT, and CI testing of the ENVG system and major components (3.2.7.1 through 3.2.7.8), in compliance with the Quality Validation Plans. The contractor shall use the same Test Procedures for all testing (PQT, FAT, AT, and CI) unless modifications are agreed upon by the IPPT. Any modifications to the agreed upon procedures shall be concurred with in writing by the IPPT chairpersons prior to being implemented. Final approval of the Test Procedures shall occur prior to commencement of PQT for the ENVG. Test Procedures are CDRL-009.

3.2.8.4 PQT Test Report. Upon completion of the PQT, the contractor shall prepare and submit a PQT Test/Inspection Report. The PQT report shall reflect the test results, to include raw data, compiled and calculated data, and conclusions. The report shall address all testing performed and all failures encountered. All conclusions shall be clearly identified as such and shall be appropriately segregated from the objective results. The PQT report is CDRL-010

3.2.8.5 Reliability Reports. Upon completion of each production reliability test for ENVG systems and major components (3.2.7.1 through 3.2.7.8), the contractor shall provide the to IPPT Production Reliability Acceptance Test (PRAT) reports in electronic format of the reliability test results. The report shall be in contractor format and shall include, but not be limited to, a test summary, test description, identification of item(s) under test, lot from which the test sample was taken, lots represented by the sample, test group number, performance requirements, test profile and operating hours, any anomalies, calculated reliability, measured values taken during the test, conclusions, and applicable Failed Item Analysis Reports (FIARs) and Sub-contractor Corrective Action Reports (SCARs). PRAT Reports are CDRL-011.

3.2.8.6 Disposition of Test Units. All test units shall be refurbished or replaced to the production configuration, following completion of testing to a working order condition capable of passing Group A test (less cosmetic defects/scratches resulting from prior testing). It is intended these units may be used for fielding. These same refurbishment requirements apply to any units included in Reliability Testing conducted under this effort.

3.2.8.7 Failed Item Analysis Reports (FIARs). The contractor shall submit a FIAR for each failure that occurs during system and component-level PQTs, FAT, CI testing, reliability testing, and Government DT/OT. The Contractor shall notify the Government within 48 hours of failure occurrence for failures occurring during system and major component (3.2.7.1 through 3.2.7.8) PQT, FAT, CI testing, and reliability testing. The Government reserves the right to stop acceptance of product at any time while any FIAR is pending based on the impact of the failure in question. The complete content of the FIAR and a list of personnel to be notified of failures shall be

concurrent on by the IPPT at the Post Award Conference. A FIAR shall not be considered closed until the IPPT has concurred on the report. Concurrence by the IPPT is required prior to shipment of any potentially affected production units. 100% inspections/test (Group A) performance data shall be made available to the Government for review upon request. The contractor shall present the Group A status (e.g., serial numbers, pass/fail, reasons for failure(s), corrective actions) at each IPPT review. Each FIAR is a separate CDRL-012 item. Each Test Failure Notification is a separate CDRL-013 item.

3.2.8.8 First Article Test (FAT) Report. Upon completion of the FAT, the contractor shall prepare and submit a FAT Test/Inspection Report. The FAT report shall reflect the test results, to include raw data, compiled and calculated data, and conclusions. The report shall address all testing performed and all failures encountered. All conclusions shall be clearly identified as such and shall be appropriately segregated from the objective results. The FAT report is CDRL-014.

3.2.9 Environmental Stress Screening (ESS). Each ENVG system shall be subjected to an Environmental Stress Screening (ESS) with an appropriate failure-free verification period. The contractor shall include a proposed ESS profile as part of the proposal and shall be designed to effectively reduce/eliminate workmanship and infant mortality type defects of the system. Causes of ESS failures shall be tracked, investigated, and closed per contractor internal procedures for the purpose of continuously improving the screen and the manufacturing processes. ESS performance data shall be made available to the Government for review upon request. Modification of the ESS profile may be allowed with IPPT approval based on ESS data evaluations. The contractor shall present the ESS status (e.g., serial numbers, pass/fail, reasons for failure(s), corrective actions) at each IPPT review.

3.2.10 Warranty of Equipment. The offeror is required to submit their commercial warranty if available. The warranty shall be included in the price of the unit product cost. During the warranty period, the contractor shall repair or replace – at no cost to the Government – any ENVG system, Test Maintenance and Diagnostic Equipment (TMDE), and related spare parts that fails under normal operations, while in storage, or during transportation. The contractor will verify warranty status and ship a spec-compliant replacement system no later than 48 hours upon receipt of the failed unit. The warranty will exclude equipment failures caused by combat damage, natural disaster, or misuse. Government acceptance of a storage warranty does not limit the Government's rights under any other term or condition of this contract. The returned unit may be either the system originally returned to the contractor or one drawn from contractor managed float assets. Float assets shall be owned by the Government. The contractor shall pay for all shipping costs for warranty items.

3.2.10.1 Warranty Process Flow Chart. The contractor shall prepare and deliver an initial Warranty Process Flow Chart as part of the proposal. The IPPT shall review and update the Warranty Process Flow Chart at the following events/times: at PDR and CDR (3.1.5.4), and 2 months, 6 months, and 12 months after the Government's first fielding of ENVG systems under this contract. The Warranty Process Flow Chart is CDRL-016.

3.2.10.2 Warranty Status Report. The contractor shall prepare and deliver a monthly Warranty Status Report. The first report is due one month after the Government's first fielding of ENVG systems under this contract. Each Warranty Status Report is a separate CDRL-017 item.

3.3 Integrated Logistics Support (ILS) & MANPRINT

3.3.1 ILS Requirements. The contractor shall plan, manage, and execute an ILS program that assures the ENVG achieves an operational availability $\geq 90\%$. The contractor's proposed logistics support plan shall be developed from a supportability analysis completed in accordance with MIL-PRF-49506 and ANSI GEIA-STD-007. The ENVG logistics support requirements shall consist of provisioning, NET/schoolhouse training materials, system support package (SSP), and technical manuals (TMs) (both Crew-level and Maintainer-level TMs), Test Maintenance and Diagnostic Equipment (TMDE), if required, repair parts and special tools list (RPSTL), and technical orders (TOs) as applicable. After establishment of the initial logistics baseline, any changes effecting form, fit, or function of the system down to the spare parts level shall be submitted to the Government for approval. Upon receipt of notification of proposed changes, the Government will identify the required contractual documentation for delivery and acceptance.

3.3.2 Maintenance Concept. The ENVG maintenance concept must conform to the Army's two-level maintenance concept. ENVG maintenance at the Crew-level shall be organic. Organic maintenance of the ENVG at the Maintainer-level is desired. The two level maintenance concept is defined by FM 430.3 and MIL-STD 40051. Maintenance support provided by Crew-level maintainers will not exceed 0.25 direct production man-hours or 2.3 direct production man-hours for the Maintainer-level over the course of a year for repair of the ENVG. Compliance with Direct Production Annual Maintenance Man-Power Hours (DPAMMH) and availability requirements at the both the Crew and Maintainer Level will be determined by the logistics management information (LMI) and the Level of Repair Analysis (LORA) provided by the offerors. Analysis of the LMI and LORA information will include, but not limited to, the skill level of the crew and maintainer, components to be maintained, projected component reliability data, and tools and technical information available at the respective level. Maintainer-level support shall consist primarily of fault isolation, removal and replacement of modules, and system exchange when necessary. The contractor shall develop and implement a Logistics plan to deliver all materials and documentation required to support the ENVG. Alternative maintenance concepts for Maintainer-level support may also be proposed, to include Life-Cycle Contract Support (LCCS), or adding repair of spared subassemblies, however offerors must provide detailed analysis to demonstrate the benefits of adopting any such proposal, especially with regard to life cycle cost as compared to organic maintenance. The contractor shall submit the draft Logistics Support Plan for their ENVG system as part of the proposal. The Logistics Support Plan is CDRL-018. The IPPT shall review and update (if necessary) the Logistics Plan at the PDR and CDR (3.1.5.4), and 2 months, 6 months, and 12 months after the Government's first fielding of ENVG systems under this contract. **If LCCS is implemented, the contractor shall prepare and deliver a monthly LCCS Report. Each LCCS Report is a separate CDRL-020. The first report is due one month after the Government's first fielding of ENVG systems under this contract. The content of the LCCS Report may require updates as agreed by the IPPT. Additionally, if LCCS is implemented, the Office of the Assistant Secretary of the Army (Manpower & Reserve Affairs) operates and maintains a secure Army data collection site where the contractor will submit a Contractor Manpower Report (CMR), reporting ALL contractor manpower (including subcontractor manpower) required for performance of the LCCS CLIN on this contract. The contractor is required to completely fill in all the information in the format using the following web address: <https://cmra.army.mil>. CMR submission is CDRL-019.** The required information includes: (1) Contracting Office, Contracting Officer, Contracting Officer's Technical Representative; (2) Contract number, including task and delivery order number; (3) Beginning and ending dates covered by reporting period; (4) Contractor name, address, phone number, e-mail address, identity of contractor employee entering data; (5) Estimated direct labor hours (including subcontractors); (6) Estimated direct labor dollars paid this reporting period (including subcontractors); (7) Total payments (including subcontractors); (8) Predominant Federal Service Code (FSC) reflecting services provided by contractor (and separate predominant FSC for each subcontractor if different); (9) Organizational title associated with the Unit Identification Code (UIC) for the Army Requiring Activity (the Army Requiring Activity is responsible for providing the contractor with its UIC for the purposes of reporting this information); (10) Locations where contractor and subcontractors perform the work (specified by zip code in the United States and nearest city, country, when in an overseas location, using standardized nomenclature provided on website); (11) Presence of deployment or contingency contract language; and (12) Number of contractor and subcontractor employees deployed in theater this reporting period (by country). As part of its submission, the contractor will also provide the estimated total cost (if any) incurred to comply with this reporting requirement.

3.3.2.1 Level of Repair Analysis (LORA). The contractor shall perform a LORA to determine the optimum maintenance concept for the ENVG. The LORA is used to determine the repair level within the Army maintenance system. The initial LORA shall be submitted as part of the contractor's proposal. The LORA is CDRL-021.

3.3.2.1.1 A LORA shall be performed on all materiel to include Test, Measurement, and Diagnostic Equipment (TMDE), if required.

3.3.2.1.2 The LORA is used to determine the optimum maintenance levels for repair actions and recovery of the end item and components. The LORA considers availability and requirements for additional tools, support equipment, and skills in intended supporting units.

3.3.2.1.3 The LORA shall address the requirement to minimize additional special tools and test equipment for new equipment.

3.3.2.1.4 The LORA process shall be initiated as early in the life cycle as possible to aid in assessing the supportability of a system. Repair can be evaluated as the system matures. As part of the post deployment evaluation, the LORA will be rerun no earlier than 1 year and no later than 3 years from First Unit Equipped Date (FUED), using actual reliability data from fielded equipment.

3.3.2.1.5 The Maintenance Allocation Charts (MACs) are an output of the LORA, and reflect the approved maintenance concept.

3.3.2.2 Definitions.

3.3.2.2.1 End Item. A final combination of end products, assemblies/materials which is ready for its intended use.

3.3.2.2.2 Spare Parts. Throughout this Statement of Work, the term “spares” or “spare parts” refers to all Line Replaceable Units (LRUs) and Shop Replaceable Units (SRUs) applicable to the ENVG proposed. The offeror shall describe the method of validation/certification of each spare item to ensure when the item is correctly utilized in a maintenance action, it will function properly, meeting the system and component (if applicable) performance requirements.

3.3.2.2.2.1 Line Replaceable Units (LRUs). Item removed and replaced “on the Line”, usually by Unit to repair the end item. LRU item can be repairable or non-repairable.

3.3.2.2.2.2 Shop Replaceable Units (SRUs). Item removed and replaced “in a repair Shop” to repair a repairable LRU or, in the case of ENVG, to repair the end item. SRU removal and replacement requires skills and tools not available at the Crew level. SRU item can be repairable or non-repairable.

3.3.2.2.3 Piece Parts. Minor consumable parts required for the maintenance, overhaul, or repair of a component, assembly, equipment or end item.

3.3.2.3 Logistics Cost Estimating Tools. The contractor is required to utilize the Army Computerized Optimization Model for Predicting and Analyzing Support Structures (COMPASS) and the Logistics Cost Estimating Tool (LCET) model as the logistics cost estimating tools under this contract. The Government will provide executable copies of the models either by download instructions or on disc. The Government will provide baseline input data and instructions as required to the contractor.

3.3.3 Special Tools, Fixtures, Test, Measurement, and Diagnostic Equipment (TMDE). No special tools or TMDE, shall be required to repair the ENVG at the Crew-level. If TMDE is required for Maintainer-Level maintenance, the contractor shall prepare and submit a supportability strategy for the TMDE, special tools, and fixtures to include the contractor’s plan to deliver training materials (both crew level and maintainer level), technical manuals (both crew level and maintainer level), warranty, calibration standards and levels, configuration control, and long-term (20-year) supportability plan. The Special Tools, Fixtures, TMDE Supportability Strategy shall be submitted as part of the Offeror’s proposal. The Special Tools, Fixtures, TMDE Supportability Strategy is CDRL-022. If special tools/fixtures/TMDE are required for organic Maintainer-level (above the Crew-level) maintenance, they shall:

3.3.3.1 function with the ENVG design that successfully completes Government DT/OT and the contractor IPT.

3.3.3.2 allow for active adjustment/setting of LRUs, SRUs, and piece parts to complete the repair of the ENVG without the use of a dark room.

3.3.3.3 not exceed 50 lb.

3.3.3.4 meet the requirements of the “SOW – Attachment 1 - ENVG TMDE (4 SEPTEMBER 2009).doc” attachment.

The Government anticipates a maximum of 500 sets of TMDE, special tools, and fixtures shall be needed to achieve organic Maintainer-level maintenance.

3.3.4 Logistics/Maintainability/MANPRINT Demonstrations (LMMD). The objective of the LMMD is to demonstrate the ENVG meets all logistics/maintainability and MANPRINT requirements and to identify any system design changes needed for improved supportability and/or reduced life cycle cost. The contractor shall plan and conduct the LMMD for the ENVG prior to Government OT using: a LMMD Plan which has been concurred to by the IPPT, Government personnel representative of the target audience trained by the contractor, and contractor provided training material and technical manuals. The LMMD Plan is CDRL-023. The contractor shall also provide test systems, a System Support Package Component List (SSPCL), and System Support Package (SSP) items required to support the LMMD in accordance with the schedule in Table 3.1. The SSPs provided will be returned (less consumables) to the contractor at the conclusion of the LMMD. The contractor shall provide a LMMD report for the ENVG. The LMMD Report is CDRL-024. The LMMD for the ENVG, along with events leading to the LMMD, shall be shown in the IPMS.

3.3.4.1 Logistics/Maintainability/MANPRINT Demonstrations (LMMD) for TMDE. The objective and the requirements of the LMMD for the TMDE are identical to the ENVG. For the TMDE, the Offeror shall provide all of the same documentation listed in paragraph 3.3.4 to include a separate LMMD Plan, LMMD Report, SSPCL, and SSP. The LMMD for the TMDE, along with events leading to the LMMD, shall be shown in the IPMS. The LMMD Plan for the TMDE is also CDRL-024. All the documentation for the TMDE shall have in parenthesis the word "(TMDE)" at the end (e.g. CDRL-024: LMMD Report (TMDE); CDRL-023: LMMD Plan (TMDE), CDRL-025: SSPCL (TMDE), etc...).

3.3.5 System Support Package (SSP). The SSP is comprised of Technical Manuals, Training, common and any required special tools and TMDE, and Spares and Repair Parts, lubricating/cleaning items, and any other item required to support the system during the LMMD and any required Operational Test. The SSP will be verified by the Government during the LMMD and OT events, to include the Air Jump. The contractor shall be prepared to provide the SSP items required to support OT events for the ENVG to the Government test site as early as 60 days prior to the start of testing. The availability of the SSP for the LMMD and for each OT shall be included in the IPMS.

3.3.5.1 System Support Package Component List (SSPCL). The SSPCL is a list comprised of all the items contained in the SSP to include the Technical Manuals, Training, common and any required special tools and TMDE, Spares and Repair Parts, lubricating/cleaning items, and any other item required to support the system during the LMMD and any required Operational Test. The SSPCL will be verified by the Government during the LMMD and OT events, to include the Air Jump. The contractor shall be prepared to provide the SSPCL required to support OT events for the ENVG to the Government test site as early as 90 days prior to the start of testing. The SSPCL is CDRL-025 for the ENVG and CDRL-025 (TMDE) for the TMDE.

3.3.6 Instructor and Key Personnel Training (I&KPT). The objective of the ENVG I&KPT is to provide operators and maintainers the required skills to operate and support the systems in a structured school environment, in garrison, and in a field environment. The contractor shall conduct I&KPT in conjunction with the LMMD. I&KPT is CDRL-050 for the ENVG and CDRL-050 (TMDE) for the TMDE.

3.3.6.1 Training. The contractor shall provide training material required to adequately reflect the ENVG and the TMDE being provided under this contract and in accordance with the approved maintenance concept. The contractor shall conduct a Crew-level training course and a Maintainer-level training course. Training shall be conducted at CONUS Government-selected sites. Training shall provide students with the skills necessary to operate and maintain the ENVG system. Training shall include, but is not limited to, all tasks contained in the Crewlevel technical manual and Maintainer-level technical manual. The contractor shall also prepare and deliver a CD or DVD of the training presentations for use as a reach-back or refresher training tool. The training material is CDRL-026 for the ENVG and CDRL-026 (TMDE) for the TMDE. The anticipated Government Training and Tech Manual review schedule is included in Table 3.1. The contractor shall provide updates to the Training for all configuration changes that occur through Contractor PQT, Government DT/OT, and verification of the ENVG maintenance concept.

3.3.6.2 Training Material to be Delivered to the Government. The contractor shall deliver to the Government all training materials reviewed and concurred to by the Government for use during the conduct of each course. The contractor shall provide drafts available for review per the SOW with updated drafts for training, as

required. Finals as updated during the conduct of the training course are due 30 days after completion of the last training class. Final submission shall be submitted with a DD Form 250. Final submissions shall be in electronic media format.

3.3.7 Technical Manuals (TMs). The contractor shall develop TMs to adequately reflect the ENVG being provided under this contract and in accordance with the approved maintenance concept. TMs shall be provided for the ENVG in accordance with MIL-STD-40051.2 and as tailored by the Government IPPT. The IPMS shall include development through final delivery of the TM material. The contractor shall provide updates to the TM for all configuration changes that occur through Contractor PQT, Government DT/OT, and verification of the ENVG maintenance concept.

3.3.7.1 Types of Manuals. TMs for the ENVG and TMDE shall consist of a pocket-sized Crew-Level Manual (-10) (CDRL-028 and CDRL-028 (TMDE)) and a Maintainer-Level Manual (-23&P) (CDRL-029 and CDRL-029 (TMDE)), including a Maintenance Allocation Chart (MAC), Repair Parts and Special Tools Lists (RPSTL), Component of End Item (COEI), Additional Authorized List (AAL), and an Expendable and Durable Items List. The Crew-Level (-10) and Maintainer-Level Manual (-23&P) shall be in Work Package Format. If an alternate maintenance concept is proposed that includes depot level tasks or repairs to the end items, SRUs or LRUs, the contractor shall include supplemental information to the -23&P as part of the alternate proposal. If Life-Cycle Contract Support is proposed, the -23&P may not be required. The contractor shall also deliver a laminated Quick Reference Cards (CDRL-030 and **CDRL-030 (TMDE)**) for the ENVG and TMDE providing basic operating procedures per paragraph 3.3.7.5. Each manual and the Quick Reference Card shall reflect the configuration of the ENVG and TMDE delivered under this contract, and shall be prepared at the reading grade level (i.e., 8th grade reading level) and comprehension level described in the target audience description provided by the Government after contract award.

3.3.7.2 Digital Files. The contractor shall deliver the TMs and Quick Reference Card digital files in native (editable) format (MS Word) in page orientation. The Crew-Level (-10) and Maintainer-Level Manual (-23&P) shall be in Work Package Format. All TMs shall also be delivered in Portable Document Format (PDF) with all fonts embedded. **There is a CLIN for Interactive Electronic Technical Manuals (IETMs) for both the -10 and -23&P. The IETM (optional) is CDRL-031 and CDRL-031 (TMDE). The authoring/reader software (IADS, for example) shall also be delivered as part of the IETM and shall be based upon native Standard Generalized Markup Language (SGML). IADS or equivalent is required. Delivery of the IETM shall be 150 days after option award.** The Government requires 30 days for review and approval or comment. Final is due 30 days after receipt of Government approval and/or comments.

3.3.7.3 TM Validation and Verification. The contractor shall schedule and conduct a TM Validation at the contractor's facility prior to a Government-run TM Verification at a Government location (i.e. Ft Bragg, NC). Contractor personnel performing operating and maintenance procedures on the equipment during validation shall be independent of the contractor's TM preparation activity. The contractor shall certify validation of the TMs to the Government in writing. The Government will perform all of the operating and maintenance procedures in each publication during Verification. The contractor shall provide the following support to the verification:

- Schedule sufficient time and materials (i.e. special and common tools, consumables, etc.) as needed for the Government to successfully complete its verification effort.
- Record and maintain records during the verification process.
- Maintain a master copy of each publication that shall be corrected during the verification process.
- Assist the contracting activity, as requested, during the verification process.
- Provide the contracting activity with a report of the corrective actions taken.

The contractor shall provide, as a minimum, at the verification site: ten copies of each validated TM to be verified; personnel necessary to document needed changes and resolve hardware issues; the subject equipment in each TM to be verified; all tools, expendables, and test equipment required, according to the MAC and maintenance procedures, to perform all procedures in each TM. The Government IPPT will verify that the TMs are suitable and that the content and features are correct. The manuals will be reviewed for the accuracy and completeness of all operating and maintenance procedures using a Government-provided target audience. The Quick Reference Cards

for the ENVG will also be verified at this time. The verification shall be at a site to be determined by the Government.

3.3.7.4 Digital Files Verification. The Government will verify that the digital files (formatted for final output, MS Word and PDF) delivered allow the Government to print paper copies of the ENVG Crew-Level and Maintainer-Level maintenance manuals. **If the CLIN for IETM is exercised, the contractor shall provide the following for IETM verification: three digital files of each IETM, operational systems, and the required tools and test equipment. The SGML tags shall be verified for proper parsing.**

3.3.7.5 Pack-Up of Crew Level TMs with Equipment The contractor shall pack one paper copy of the TM containing Crew-level instructions and a laminated Quick Reference Card (QRC) with basic system operating instructions, with each ENVG system delivered under this contract. The contractor shall print both the TM and the laminated QRC through initial qualification (3.2.8). Upon successful initial qualification, the contractor shall print only the laminated QRC.

3.3.8 Human Factors Engineering (HFE). The contractor shall implement a Human Factors Engineering program to assure the ENVG conforms to the requirements of its Performance Specification and to address any HFE issues found during Government DT/OT (3.2.8.1). The HFE program shall focus on Soldier portability, Soldier/system interface, system set-up and tear-down, and maintenance operations. The HFE program progress and current findings shall be presented at each IPPT review. The HFE Program Progress and Current Findings are CDRL-032 and CDRL-032 (TMDE) for the TMDE..

3.3.9 Provisioning Technical Documentation (PTD). The contractor shall work with the IPPT to develop and provide a Provisioning Parts List (PPL) suitable for submission to the Provisioning Master Record (PMR) of the Commodity Command Standards System. PPL is CDRL-033 for the ENVG and CDRL-033 (TMDE) for the TMDE. The PPL shall be structured at the end item, component, or assembly level as specified by the Maintenance Allocation Chart in a top-down breakdown sequence. The PPL shall contain the end item, component, or assembly equipment and all support items which can be disassembled, reassembled, or replaced and which when combined, constitute the end item, component or assembly equipment and any special tools and/or kits. The PPL shall provide all data and information required to support the Repair Parts and Special Tools List (RPSTL) portion of the Technical Manuals. The contractor shall allow for up to 6 months for Government NSN assignment, which commences upon Government receipt of the proper PTD and associated drawings. The PTD, drawings, and NSN assignment are required to be completed prior to TM verification. The submission and approval process of the PTD and associated drawings shall be reflected in the IPMS. The contractor shall provide Engineering Data for Provisioning (EDFP) for all maintenance-significant items (SMR1='P') on the PPL which do not have National Stock Numbers (NSNs). EDFP is CDRL-034 for the ENVG and CDRL-034 (TMDE) for the TMDE. Engineering Data for Provisioning shall be data such as specifications, sketches or drawings with descriptions necessary to indicate the physical characteristics, location, and function of the item to permit proper cataloging. Data within the PPL shall permit spares requirements calculations so that the provisioning parts buy can be initiated upon receipt of the stock number assignments. The contractor shall provide updates to the PPL, with accompanying EDFP, for all configuration changes that occur through final hardware delivery. The PTD and EDFP shall be developed in accordance with MIL-PRF-49506 and delivery of the PPL and the EDFP shall be as agreed to by the IPPT and documented in the IPMS. Upon acceptance by Government, the contractor shall submit by DD250. The contractor shall provide updates to the PPL, with accompanying EDFP, for all configuration changes that occur through final hardware delivery. Delivery of the PPL shall be in ASCII text format electronic media (fixed length 80 card format) together with accompanying hardcopy listing. Delivery of the EDFP shall be in electronic media where available. As a minimum, hardcopy EDFP is acceptable and must be of reproducible quality. See Provisioning Data Requirements Forms for PPL content information below.

ENVG Program Data Requirements Form for Provisioning Guidance

DATA REQUIREMENTS FORM					
PROVISIONING REQUIREMENTS	LSA 036 CARD BLOCK	R E Q D	S F P P L	P P L	D C N
DATA ELEMENT TITLE					
CROSS FUNCTIONAL REQUIREMENT (SEE SOW)					
PCCN (Government provides)	1	X		X	X
PLISN	2	X		X	X
TYPE OF CHANGE CODE	3	X			X
INDENTURE CODE	A-4	X		X	X
CAGE CODE	A-5	X		X	X
REFERENCE NUMBER	A-6	X		X	X
ADDITIONAL CAGE CODE	A-5	X		X	X
ADDITIONAL REFERENCE NUMBER	A-6	X		X	X
ESSENTIALITY CODE	A-11	X		X	X
ITEM NAME	A-12	X		X	X
SHELF LIFE	A-13	X		X	X
UNIT OF MEASURE	B-16	X		X	X
UNIT OF MEASURE (UM) PRICE	B-17	X		X	X
SOURCE, MAINT AND RECOVER CODE	B-22	X		X	X
DEMILITARIZATION CODE	B-23	X		X	X
PRODUCTION LEAD TIME	B-24	X		X	X
PHYSICAL SECURITY PILFERAGE CODE	B-26	X		X	X
PRECIOUS METAL INDICATOR CODE	B-27	X		X	X
NEXT HIGHER ASSEMBLY (NHA) PLISN	C-29	X		X	X
QUANTITY PER ASSEMBLY	C-32	X		X	X
QUANTITY PER END ITEM	C-33	X		X	X
MAINTENANCE REPLACEMENT RATE I	C-34	X		X	X
MAINTENANCE REPLACEMENT RATE II	C-35	X		X	X
MAINT REPLACEMENT RATE MODIFIER	C-36	X		X	X
SAME AS PLISN	C-38	X		X	X
USABLE ON CODE (Government provides code)	D-43	X		X	X
MAINTENANCE TASK DISTRIBUTION (for reparable items only)	E-58	X		X	X
REPLACEMENT TASK DISTRIBUTION	E-60	X		X	X
CHANGE AUTHORITY NUMBER	F-67	X			X
INTERCHANGEABILITY CODE	F-68	X			X
SERIAL NUMBER EFFECTIVITY	F-69	X			X
REPLACED OR SUPERSEDING (R/S) PLISN	F-71	X			X
R/S PLISN INDICATOR	F-72	X			X

OPTIONAL: Additional information may be included for "H" Remarks card and "J" and "K" RPSTL cards as useful for contractor and government provisioning and RPSTL reviews.

3.3.10 (Intentionally left blank)

3.3.11 Configuration Management

3.3.11.1 Configuration Management Objective. The objectives of the Configuration Management requirements are to assure the Government the contractor maintains a structured approach to controlling the configuration integrity of the production systems, maintains interchangeability of hardware, and assures the functional baseline of the ENVG is maintained throughout the contract life.

3.3.11.2 Configuration Management Plan (CMP). The Configuration Management Plan (CMP) shall describe the contractor's configuration management program, how it is organized, how it will be conducted, and the methods, procedures and controls relative to the ENVG program. The content of the CMP shall define the technical and administrative guidelines for change control, status accounting, and audits of the total configuration. Also included shall be the implementation of the use of firmware, relative to contractor test stations. The Contractor will submit electronic engineering change control documents for DD1692 Engineering Change Proposal, DD1695 Notice of Revision, and DD1696 Specification Change Notice. The Government can supply the Contractor with these Government forms in Microsoft Word format, if requested. The Contractor shall use, as guidance, DI-CMAN-80858 "Contractor's Configuration Management Plan" and MIL-HDBK-61 "Configuration Management Guidance" in the preparation of the CMP. The CMP shall be prepared using contractor format. The CMP for ENVG is CDRL-035 and the CMP for TMDE is CDRL-035(TMDE).

3.3.11.3 System Baseline. The ENVG Performance Specification shall represent the Functional Baseline which will be maintained by the Government. The Product Baseline shall be established for the ENVG at the successful completion of all testing including the contractor PQT and Government DT/OT, and the Physical Configuration Audit/Functional Configuration Audit (PCA/FCA) and shall be maintained by the contractor. The contractor shall provide, at the next IPPT review after the system's successful PQT, a complete drawing and performance specification list for the system and major components (3.2.7.1 through 3.2.7.8.) which reflect the Product Baseline and includes the drawing/specification revision number and drawing/specification date. The Product Baseline is defined by the system and major component (3.2.7.1 through 3.2.7.8) performance specifications, engineering drawings, parts lists, and process specifications down to the spare parts level, which shall be in contractor formats.

3.3.11.3.1 Spared Item Product Performance Specifications. The Offeror shall submit an ENVG Performance Specification and major component (3.2.7.1 through 3.2.7.8) performance specifications that capture the performance of the offeror's proposed system in response to the Government's ENVG Purchase Description. Following completion of PQT and Government DT/OT, the ENVG IPPT shall finalize the performance specifications. These specifications shall become Government documents and may be used in conjunction with the contractually required spare parts ICDs to support competitive procurement of spared items during the life cycle of the proposed ENVG. These performance specifications for the major spared items/replacement parts shall contain all information necessary to define the operation/performance of each of the individual spared items/replacement parts. Performance Specifications are CDRL-036 and Performance Specifications for TMDE are CDRL-036(TMDE). The contractor's initial Performance specifications for the system and major components shall be included as part of offeror's proposal in response to the Request For Proposal.

3.3.11.3.1.1 Test Requirements. The Quality Assurance Provisions shall include a description of the specific test requirements to assure performance of the item at the next higher assembly level and/or system level. Input and output signals or stresses and tolerances shall be specified. The drawings shall include a complete description of any unique or unusual test procedures/methods and all data required to duplicate electrical test set-ups, jigs, fixtures or tests stations.

3.3.11.3.1.1.1. When special test/inspection equipment is required, the contractor will create Special Inspection Equipment Drawings and Associated Lists as required by applicable Notices of Revision.

3.3.11.3.1.1.2. When environmental conditions are specified, tests to assure conformance shall be included. These tests shall describe the nature of the environmental stress and the parameters to be measured during or after (as appropriate) application of the environmental stress.

3.3.11.4 Configuration Control. Any changes to the Product Baseline shall result in a common configuration for Government operational use and maintenance activities that provides interchangeability and interoperability to the replaceable part level. The Product Baseline shall be documented in the contractor's configuration status accounting database. Any changes to the Functional and/or Product Baselines shall be made via Engineering Change Proposal (ECP) per paragraph 3.3.11.7.1 of this statement of work. At any time during the period of performance of the contract, the contractor shall provide upon Government request within 30 days, an allocated baseline of all hardware delivered as of the date of request. The allocated baseline will include, at a minimum for each serial numbered system, the relevant functional and product baseline, and any discriminating information down to the spare level (serial numbers, item revision and/or lot number, date of manufacture).

3.3.11.5 Engineering Drawings. The contractor shall prepare and submit drawings down to the spare part level for the ENVG and TMDE in accordance with the requirements of this paragraph. Any TMDE items or special tools, if required (3.3.3), associated with the proposed ENVG and TMDE must also be included in the drawing package submittal in accordance with the same requirements as the spared item drawings for the ENVG and TMDE. The contractor shall prepare and submit product drawings and associated lists as Interface Control Drawings (ICDs) at the spare part/assembly-level that assure 100% form, fit, and function interchangeability IAW CDRL-037 for the ENVG and CDRL-037 (TMDE) for the TMDE. Dimensioning and tolerances shall be IAW ASME Y14.5M-1994 or equivalent. The drawings shall provide sufficient information to enable the procurement of an interchangeable item that duplicates the physical and performance characteristics of the original product, without additional design engineering effort or recourse to the original design activity. The interface control drawings shall include:

- a. Configuration and interface dimensional data applicable to the envelope, mounting and interconnection of the related items;
- b. Complete interface engineering requirements (mechanical, electrical, electronic, optical, human, etc.) which affect the physical or functional characteristics of the cofunctioning items;
- c. Any items referred to in paragraphs 3.3.11.5.1 through 3.3.11.5.8.
- d. Any other characteristics which cannot be changed without affecting system interfaces or interfering down to the spareable level.

Drawing types to be submitted are as follows:

3.3.11.5.1 Assembly Drawings. Assembly drawings shall be prepared for each instance in which two or more parts are connected by means which permit disassembly without destruction of any parts. The following data shall be provided:

- Sufficient views to demonstrate the relationship of each part comprising the assembly.
- Part or other identifying number for each part.
- Quantity of each part required for one assembly.
- All required assembly operations, including clearance data, required adjustments, hand or machine fitting, etc. Assembly interchangeability control dimensions and tolerances shall also be included. Such dimensions shall be referenced by the following note:

NOTE: Assembly of parts shall be adjusted to meet these requirements.

- Cross references to Parts List, Next Assembly, Wiring Schematic Diagrams and Test Procedures.

In addition, Assembly Drawings will be referenced by corresponding Parts List and Connection or Wiring Diagrams, as described below.

3.3.11.5.2 Parts List. Parts lists identify all subordinate assemblies and parts that apply to the corresponding assembly drawing. Such assemblies and parts will be referenced by name and quantity required to assemble a single assembly, unit, module, etc. All replaceable parts needed for operation of the assembly under consideration, such as tubes, fuses, pilot lamps, etc., will be included. Items listed on a subordinate assembly parts list shall not be repeated or referenced on the Parts List for the next-higher assembly.

3.3.11.5.2.1 A separate or integral Parts List shall be prepared for each assembly that requires a call-out of parts. The contractor will determine separate or integral Parts Lists are used. However, the entire drawing package will use a consistent Parts List format, i.e., all separate or all integral.

3.3.11.5.2.2 When Parts Lists are integral with the assembly drawings, the list shall contain, as a minimum, the following columns:

- Find Number.
- Quantity Required.
- Code Identification.
- part or Identifying Number.
- Nomenclature or Item Description.
- Specification.
- Notes.

3.3.11.5.2.3 Drawings of approved alternate designs or alternate parts shall not be listed in Parts Lists. The alternate drawings shall be referenced as an alternate on the approved design drawing.

3.3.11.5.3 Schematic Drawings. Electrical or electronic schematic drawings in accordance with ASME Y14.15 shall be prepared for each unit, module and assembly. Schematics shall show electrical connections to each part and assembly, without regard to their physical location.

3.3.11.5.4 Specification Data. Data shall provide all performance requirements and parameters to characterize and quantify the function and operation of the end-item, in addition to each unit, assembly and module at the operating level for which it was designed. Such data shall include the environmental conditions under which the performance requirements are to be met. This requirement shall not result in a duplication of the overall equipment or unit specification(s) reference by this contract. However, all specification data necessary for fabrication, evaluation and acceptance of subordinate units, assemblies, and modules shall be included as part of the drawings.

3.3.11.5.4.1 Module Data. Module drawings shall include all input and output parameters necessary to define and evaluate the module's operation in the next higher assembly. Sufficient identification data (i.e., specification and drawings) for all parts of the test setup shall be furnished. At a minimum, the data shall include:

- A description of the module's function.
- Input power.
- Input and output signal characteristics in terms of voltage levels.
- Wave shapes, pulse widths, rise and delay times and settling time.
- Complete test methods and procedures, including schematic diagrams of all test equipment setups required to evaluate all module operational parameters. The use of a unit or operating assembly as a test bed or fixture to evaluate module performance is not acceptable.

3.3.11.5.4.2 Digital Signal Processing Circuits. Testing requirements for digital circuits shall specify all possible combinations of inputs and resulting outputs. Inputs and output signal parameters shall be explicitly defined. Truth tables alone are not sufficient to specify the input/output characteristics of a given digital circuit, but

may be provided as supplementary information. GO/NO-GO type acceptance criteria shall be acceptable only for those measurements where test effectiveness is not compromised AND must be agreed upon by the IPPT.

3.3.11.5.4.2.1 The following data shall be specified as applicable:

- Rise and fall times.
- Amplitude and levels.
- Phase relationships to other inputs.
- Pulse widths.
- Overshoot and ringing.
- Source impedance characteristics if non-linear.
- Jitter.
- Frequency and stability.
- Bit Patterns or "words".
- Interface circuitry required.

3.3.11.5.4.2.2 System clocks that reference generated test signals shall meet the same frequency accuracy and short term stability requirements as the end item clock or the system clock used to generate input signals for the end item.

3.3.11.5.4.3 Digital-to-Analog (D/A) and Analog-to-Digital (A/D) Mix Circuits. Applicable requirements for digital circuits shall be specified to define the test requirements for D/A and A/D circuits.

3.3.11.5.4.4 Alignment Procedures. Alignment procedures and drawings shall provide all data required to functionally duplicate electrical and mechanical test set-ups (e.g. jigs, fixtures and test stations) including all alignment procedures used to adjust and evaluate the performance of the major components (3.2.7.1 through 3.2.7.8), modules, assemblies and units. Such data shall be provided on the assembly drawing. These procedures and drawings shall duplicate those used by the contractor's personnel and include the attributes listed below.

3.3.11.5.4.4.1 Performance Objectives. Define all parameters and reference all associated drawings and/or specifications (by number and title) that specify the performance of the item to be tested. All alignment requirements shall be defined through the use Government-approved contractor test equipment, or standard equipment.

3.3.11.5.4.4.2 Alignment Equipment. Identify test equipment (electrical, mechanical, etc.) by manufacturer's name and model number, e.g., Crystal Detector, Ajax Electronics AE 364 including power supplies, supplementary plug-in leads and special probes.

3.3.11.5.4.4.3 Initial Conditions. Specify all steps to be taken by the test operator prior to connection in the test set-up or insertion in a jig, fixture, or gage. For example, the operator may be required to perform a visual examination of the item prior to power-up to assure proper polarization of diodes and tantalum capacitors, alignment of connector pins, adjustment of shafts and rotors, etc.

3.3.11.5.4.4.4 Alignment Set-Up. The alignment procedure drawing(s) will include a step-by-step block diagram, all dial and meter settings, a description of the interconnections with the item to be aligned and a description of the actual alignment set-up fixture or gage. When the contractor uses an electrical test fixture designed for a specific purpose, the drawing shall include a complete schematic diagram of the fixture and all information required to calibrate it using standard test equipment. When the contractor is required to furnish electrical test fixtures and test procedures as a separate item on this contract, the test procedure (requiring use of the fixture) shall be referenced on the assembly drawing of the applicable unit, assembly, or module.

3.3.11.5.4.4.5 Alignment Data. Define the purpose of the test and/or alignment, including a description of the required adjustments and all precautionary and special handling notices to prevent damage and ensure safety. Alignment data shall be provided for each tunable module, assembly, and/or unit, and will completely detail

following example as provided for reference. Note that the alignment data is provided, followed by a description of the sequences of operations.

EXAMPLE

Set scope to full deflection (bottom grid line is base line, top grid line is peak), adjust R4, R5, and R6 to obtain plus 7.0 volts DC, -.0 volts DC and plus 7.0 volts DC at test points TP2, TP3, and TP4 respectively and adjust L1 for an output frequency of 72.30MHz plus or minus .05MHz.

VC and Buffer Amplifier Reference Figure (Block diagram)

Through the two-way power divider, connect the RF output jack. Using a probe, apply 12 volts DC to the junction of R16 and R21. Adjust C35 for maximum power output. Adjust C37 to R21. Adjust C35 for maximum power output. Adjust C37 to 76.25MHz plus or minus 0.12MHz. Read just C35 and C37 for maximum power and correct frequency.

3.3.11.5.6 Dimensions, Tolerances, and Electrical Characteristics. Actual dimensions and tolerances required for manufacture shall be provided. All dimensions that determine interchangeability of parts, modules, assemblies, and units shall use positional and other tolerancing in accordance with ASME Y14.5. Electrical characteristics and performance parameters of parts, modules, assemblies, and units shall be expressed as numerical values with tolerances specifying upper and lower (or maximum and minimum) limits.

3.3.11.5.7 Materials. The materials used to manufacture all parts and all required treatments shall be described completely on the applicable drawing(s), or referenced by a specification or standard for the material. When specification or standards do not exist, the description shall include common trade name, chemical composition and name and address of the manufacturer or licensor. Alternate materials approved design may be specified on the drawings in addition to the original material.

3.3.11.5.8 Finishes. Protective coatings, paintings, and other finishes, include prior treatment, shall be referenced by the finish designations described in MIL-DTL-14072. When protective finishes are used that are not included in MIL-DTL-14072, the finish shall be completely defined on the drawing, or referenced by other specifications or standards.

3.3.11.5.9 Production Drawing Package for Second Source. The Government may establish an additional source for the ENVG and/or major ENVG replacement assemblies/spare parts (3.2.7.1 through 3.2.7.8) and/or any TMDE items or special tools (3.3.3) required to support/sustain the ENVG. The contractor shall support this by providing a production drawing package including sufficient detailed assembly and component data, to include, but not limited to specifications) to build, qualify, and support/sustain ENVG systems of the approved configuration. The contractor shall provide drawings and associated specifications for all system parts except for details below the image intensifier tube and power supply, thermal sensor, and micro-display which will be at Interface Control Documentation level. The Production Drawing Package for TMDE is CDRL-045 and CDRL-045(TMDE) for TMDE.

3.3.11.6 Physical Configuration Audit (PCA)/Functional Configuration Audit (FCA) A PCA/FCA shall be conducted for the ENVG design, down to the spareable level, that successfully completes contractor PQT and Government DT/OT. The PCA/FCA shall also include any TMDE, special tools, and fixtures required to support/sustain the ENVG. The contractor shall host and support a PCA/FCA of equipment to be delivered under this contract. The PCA/FCA shall include all hardware and software developed for this contract and any hardware or software that is to be modified as a result of this contract. The contractor shall prepare a PCA/FCA plan in contractor format that shall be approved by the IPPT prior to the commencement of the PCA/FCA. The PCA/FCA shall be conducted no later than 60 days after the contractor submits the final PCA/FCA plan. The PCA/FCA shall

be conducted on all interface, mating and interconnection dimensions, and shall include a visual inspection of all subcomponents, as a minimum. In the event the IPPT finds evidence the drawings do not adequately represent the equipment design and details of construction, acceptance of the equipment on order may be stopped until corrective action, acceptable to the IPPT, has been accomplished. The contractor shall prepare a report recording the result of the PCA/FCA. The PCA/FCA Plan & Report is CDRL-046 for the ENVG and CDRL-046 (TMDE) for the TMDE.

3.3.11.7 Engineering and Configuration Control Documentation For all requested configuration changes, the contractor shall prepare and submit Engineering Change Proposals (ECPs), Value Engineering Change Proposals (VECPs), Requests for Deviation (RFD), and Requests for Waiver (RFW) to the IPPT for concurrence. Electronic submittal of ECPs, VECPs, RFDs, and RFWs shall be Microsoft Office 2000 compatible digital files. Delivery shall include merged text and graphics. Each ECP, VECP, RFD, and RFW is a CDRL-048 item.

3.3.11.7.1 Engineering Change Proposal (ECP). The contractor shall prepare a separate ECP for each engineering change that has its own distinct objective and is against a Government approved baseline. The contractor shall prepare and submit ECPs to the Government that shall include appropriate Notices of Revision, Specification Change Notices, and technical manual change pages, as necessary in accordance with the CMP.

3.3.11.7.2 Value Engineering Change Proposal (VECP). The contractor shall submit VECPs in accordance with the value engineering clause of this contract.

3.3.11.8 Tolerance Analysis Report. The contractor shall include a tolerance analysis as backup data for all configuration control document submittals.

3.3.12 Safety. The contractor shall ensure the ENVG presents no uncontrolled safety hazards to operators or maintainers.

3.3.12.1 Safety Assessment Report (SAR). The contractor shall prepare and submit a SAR for the ENVG addressing items detailed in the SOW, contractor format is acceptable. The SAR shall evaluate the safety risks being assumed prior to test or operation of the system and provide specific controls or precautions to be followed. The SAR shall document the safety risk being assumed during operation. The SAR shall identify all safety features of the system, specific controls or precautions to be followed during use, and shall provide verification of compliance to safety requirements identified in this specification. The contractor shall provide updates to the SAR for all configuration changes that occur during initial qualification of the ENVG. As stated in 3.2.8, initial qualification of the ENVG requires successful completion of the Government witnessed PQT to include Reliability Testing, successful completion of Government conducted Developmental Testing (DT) and Operational Testing (OT), including Follow-on Testing (FOT) if required, in accordance with paragraph 3.2.8.1, as well as meeting all paragraph 3.3 (Integrated Logistics Support & MANPRINT) sub-paragraph requirements for the system. If toxic/hazardous materials are utilized, the contractor shall provide the technical information required to complete Part II of the DRMS Form 1930, Hazardous Waste Profile Sheet. The contractor shall obtain an AKO account as sponsored by the U.S. Army ENVG APM. Once this account is established the Government will provide the contractor with the proper account information for entry into the eHATS system. The contractor shall enter all system hazards into the CECOM Hazard Tracking System (eHATS), located on-line at: <https://cecom100.monmouth.army.mil/safety/ehts/index.html>.

The hazard tracking log, created from this site, shall be attached to the SAR. The SAR is CDRL-049.

3.3.12.1.1 Toxic Substances. The SAR shall identify toxic and environmentally unacceptable materials used in the design and production of the systems and components, any possible alternative materials, and recommended actions to eliminate or reduce the use of hazardous materials. The SAR shall address any exposure concerns to personnel during operational or maintenance procedures to include fabrication, transportation, setup and tear down, or resulting from damage to the equipment. The contractor shall identify any material used in the system design that requires disposal as a hazardous waste. Radioactive material shall NOT be utilized in the system design and production without prior approval by the Government. The SAR shall specifically describe control measures taken to ensure that the hardware is free of any radioactive materials, including optical glass and lens coatings.

3.3.12.1.2 Safety Inspection/Verification. The contractor shall schedule sufficient time in the program schedule to permit a safety inspection of the system by the Government prior to Soldier involved technical or user testing and associated training, or contract completion. The inspections will be used to verify the information contained in the SAR. The contractor must allow sufficient time to correct any unresolved high or medium risk hazards prior to testing or delivery of the system to the Government.

3.3.12.1.3 Hazard Tracking. The contractor shall obtain an AKO account as sponsored by the U.S. Army ENVG APM. Once this account is established we will provide the contractor with the proper account information for entry into the eHATS system. The contractor shall enter all system hazards into the CECOM Hazard Tracking System (eHATS), located on-line at: <https://cecom100.monmouth.army.mil/safety/ehts/index.html>. The hazard tracking log, created from this site, shall be attached to the SAR.

3.3.12.1.4 Pollution Prevention. The contractor shall implement a hazardous material and pollution prevention program ensuring compliance with all Local, State, and Federal laws.

APPENDIX A

ENVG SOW

TEST REQUIREMENTS

1) For Production Qualification Test (PQT) and First Article Test (FAT), the contractor shall test to ALL requirements of the ENVG Performance Specification offered in response to the Government’s ENVG Purchase Description. Once PQT and FAT have been successfully completed, the following table outlines the groups, frequency, and sampling plans for Conformance Inspections (CI) and 100% unit Acceptance Tests (AT) for the ENVG at the system level, and shall be used as a baseline in establishing the ENVG QVP matrix at the system level.

FREQUENCY

- M - Monthly
- Q – Quarterly
- B – Biannually
- A - Annually

2) The table is an established lot-by-lot sampling inspection in accordance with ANSI/ASQ Z1.4:2008: Sampling Procedures and Tables for Inspection by Attributes. The contractor may also consider continuous sampling inspection in accordance with MIL-STD-1916, DoD Test Method Standard, DoD Preferred Methods for Acceptance of Product. For continuous sampling, the contractor shall start out using, as a minimum, a Verification Level II as defined in MIL-STD-1916. Samples shall be randomly selected from the entire lot during the month’s where testing is required.

3) Tests marked with an “*” shall be performed as pre-tests and post-tests for each test outlined in Group C (Subgroups 1 and 2) and Group D.

4) Tests marked with an “**” shall use systems that have successfully completed the Group C testing for the month that the test is scheduled.

5) Reliability test sample size may increase to greater than 5 systems, as long as the minimum number of hours on each system under test is 400 operating hours or greater on average.

Table Appendix 1. ENVG Test Requirements

<i>Test</i>	<i>Requirement</i>	<i>Freq.</i>	<i>Sample</i>
Inspections			
Major Components	3.3.2		100%
Finishes *	3.4.4		100%
Product Marking *	3.4.6		100%
Workmanship *	3.4.5		100%
Group A			

<i>Test</i>	<i>Requirement</i>	<i>Freq.</i>	<i>Sample</i>
Low Battery Indicator *	3.3.3.2.3		100%
High Light Cut-off *	3.3.4.12		100%
Image Alignment *	3.3.7.2		100%
Interoperability *	3.3.3.11		100%
Eyepiece Diopter Adjustment *	3.3.3.7		100%
Image Intensified ResoIOTion *	3.3.4.14		100%
Focus Adjustment	3.3.4.9		100%
Brightness Gain *	3.3.4.17		100%
Display Brightness *	3.3.6.4		100%
Auto Shut-off Capability *	3.3.8.3		100%
Thermal Imagery Color *	3.3.6.5		100%
Polarity *	3.3.5.6.14		100%
Light Emitting Diode (LED) *	3.3.4.5		100%
Image Quality *	3.3.3.14		100%
Image Presentation *	3.3.3.13		100%
Display Defective Pixels *	3.3.6.3		100%
Image Uniformity *	3.3.5.6.2		100%
Large Area Uniformity (LAU) *	3.3.5.6.3		100%
Small Area Uniformity (SAU) *	3.3.5.6.4		100%
Minimum Resolvable Temperature (MRT) *	3.3.5.2		100%
Signal Transfer Function (SiTF) *	3.3.5.6.13		100%
Spatial Noise	3.3.5.6.10		100%
ESS	ENVG SOW 3.2.9		100%
Group B			
Battery Life	3.3.3.2.1, 3.3.3.2.2	Q	Level I, 2.5%
Off Axis Veiling Glare	3.3.4.16	Q	Level I, 2.5%
Response Outside FOV	3.3.5.6.12	Q	Level I, 2.5%
Noise Equivalent Temperature (NET)	3.3.5.6.9	Q	Level I, 2.5%
Weight	3.3.3.1	Q	Level I, 2.5%
Group C			
Subgroup 1 (Tested in order listed)			
Vibration	3.5.1	M	Level S-4, 1.5%
High Temperature	3.5.1.1	M	Level S-4, 1.5%
Low Temperature	3.5.1.2	M	Level S-4, 1.5%
Temperature Shock	3.5.1.3	M	Level S-4, 1.5%
Immersion	3.5.7	M	Level S-4, 1.5%
Humidity	3.5.4	M	Level S-4, 1.5%
Subgroup 2			
Altitude	3.5.3	Q	Level S-4, 1.5%
Blowing Rain	3.5.16	Q	Level S-4, 1.5%
EMI **	3.5.15.1	A	Three Systems
Audibility **	3.3.3.10.2	A	Three Systems
Group D			
Reliability	3.6	M	Five systems

CDRL PRICING - BASE YEAR

CLIN	DESCRIPTION	QTY	UNIT PRICE	Extended
1001AC	CDRL-001: Integrated Program Master Schedule(IPMS)			NSP
1001AC	CDRL-002: Risk Management Document + 3 IPPT Updates			NSP
1001AC	CDRL-003/-004: IPPT Meeting Documentation			NSP
1001AC	CDRL-006: System Engineering Plan(SEP) initial & Final			NSP
1001AC	CDRL-008: Quality Validation Plans (Initial proposal, component QVPs & updates)			NSP
1001AC	CDRL-009: Test Procedures (ENVG System & Major Components)			NSP
1001AC	CDRL-010: Production Qualification Test (PQT) Report	1	(b) (4)	
1001AC	CDRL-011: Production Reliability Acceptance Test (PRAT) Reports (A/R)			NSP
1001AC	CDRL-012: Failed Item Analysis Reports (FIAR)(A/R)			NSP
1001AC	CDRL-013: Test Failure Notification(A/R)		NSP	NSP
1001AC	CDRL-016: Warranty Process Flow Chart		NSP	NSP
1001AC	CDRL-018: Logistics Plan (initial + 5 updates)			NSP
1001AC	CDRL-021: Level of Repair Analysis (LORA) (initial + PY4 versions)			NSP
1001AC	CDRL-023: Logistics/Maintainability/ MANPRINT Demonstrations (LMMD) Plan	1	(b) (4)	
1001AC	CDRL-023: Logistics/Maintainability/ MANPRINT Demonstrations (LMMD) Plan (TMDE)	1	(b) (4)	
1001AC	CDRL-025: LMMD System Support Component List (SSPCL)	1	(b) (4)	
1001AC	CDRL-026: Training Materials	1	(b) (4)	
1001AC	CDRL-028: Technical Manual (TM) Crew Level (-10)	1	(b) (4)	
1001AC	CDRL-029: Technical Manual(TM) - Maintainer Level (-23&P)	1	(b) (4)	
1001AC	CDRL-030: Technical Manual (TM) - Quick Reference Card (QRC)			NSP
1001AC	CDRL-031: Technical Manual (TM) - Interactive Electronic Technical Manual (IETM)(option)	1	(b) (4)	
1001AC	CDRL-032: Human Factors Engineering (HFE)Program Progress and Current Findings (Post Award &IPPTs)			NSP
1001AC	CDRL-033: Provisioning Technical Documentation (PTD) - Provisioning Parts List (PLL)	1	(b) (4)	
1001AC	CDRL-034: Provisioning Technical Documentation (PTD) and Engineering Data for Provisioning (JEDFP)	1	(b) (4)	
1001AC	CDRL-035: Configuration Management Plan (CMP)			NSP
1001AC	CDRL-036 Performance Specifications (Initial & Final)			NSP
1001AC	CDRL-037: Engineering Drawings and Alignment Procedures (Initial)	1	(b) (4)	
1001AC	CDRL-048: Engineering Change/Configuration Control Documentation (ECP, VECF, RFD, RFW, tolerance analysis)			NSP

1001AC	CDRL-049: Safety Assessment Report (SAR) (initial & Final)	1	(b) (4)	
1001AC	CDRL-050: I&KPT		NSP	NSP
TOTAL 1001AC			(b) (4)	

CDRL PRICING - PY2

CLIN	DESCRIPTION	QTY	UNIT PRICE	EXT PRICE
2003	CDRL-001: Integrated Program Master Schedule(IPMS)		NSP	NSP
2003	CDRL-002: Risk Management Document IPPT Updates x4		NSP	NSP
2003	CDRL-003/-004: IPPT Meeting Documentation		NSP	NSP
2003	CDRL-011: Production Reliability Acceptance Test Reports (PRAT) (A/R)			NSP
2003	CDRL-012: Failed Item Analysis Reports (FIAR)(A/R)		NSP	NSP
2003	CDRL-013: Test Failure Notification (A/R)		NSP	NSP
2003	CDRL-024: Logistics/Maintainability/MANPRINT Demonstrations Report	1	(b) (4)	
2003	CDRL-024: Logistics/Maintainability/MANPRINT Demonstrations Report (TMDE)	1		
2003	CDRL-025: LUT/Air Jump System Support Component List (SSPCL)	1		
2003	CDRL-025: LUT/Air Jump System Support Component List (SSPCL) (TMDE)	1		
2003	CDRL-032: Human Factors Engineering (HFE)Program Progress and Current Findings (IPPTx4)	1		
2003	CDRL-048: Engineering Change/Configuration Control Documentation (ECP, VECP, RFD, RFW, tolerance analysis)			NSP
TOTAL CLIN 2003			(b) (4)	

CDRL PRICING - PY3

CLIN	DESCRIPTION	QTY	UNIT PRICE	EXT PRICE
3004	CDRL-001: Integrated Program Master Schedule(IPMS)		NSP	NSP
3004	CDRL-002: Risk Management Document - IPPT Update x 4		NSP	NSP
3004	CDRL-003/-004: IPPT Meeting Documentation - IPPT x 4		NSP	NSP
3004	CDRL-006: System Engineering Plan(SEP) - (Final)		NSP	NSP
3004	CDRL-011: Production Reliability Acceptance Test (PRAT) Reports (A/R)		NSP	NSP
3004	CDRL-012: Failed Item Analysis Reports (FIAR)(A/R)		NSP	NSP
3004	CDRL-013: Test Failure Notification (A/R)		NSP	NSP
3004	CDRL-014: First Article Test (FAT) Report	1	(b) (4)	

3004	CDRL-016: Warranty Process Flow Chart (Final)			NSP	NSP
3004	CDRL-017: Warranty Status Reports (monthly)			NSP	NSP
3004	CDRL-018: Logistics Plan (Final)			NSP	NSP
3004	CDRL-032: Human Factors Engineering (HFE)Program Progress and Current Findings (IPPTx4)				NSP
3004	CDRL-036 Performance Specifications (Final)			NSP	NSP
3004	CDRL-037: Engineering Drawings and Alignment Procedures (Final)	1		(b) (4)	
3004	CDRL-037: Engineering Drawings - Interface Control Drawings (ICD) (TMDE) (Final)	1			
3004	CDRL-046: Physical Configuration Audit/Functional Configuration Audit (PCA/FCA) Plan & Report	1			
3004	CDRL-046: Physical Configuration Audit/Functional Configuration Audit (PCA/FCA) Plan & Report (TMDE)	1			
3004	CDRL-048: Engineering Change/Configuration Control Documentation (ECP, VECP, RFD, RFW, tolerance analysis)				NSP
3004	CDRL-049: Safety Assessment Report (SAR) (Final)	1		(b) (4)	
3004	CDRL-049: Safety Assessment Report (SAR) (Final) (TMDE)	1			
			TOTAL CLIN 3004		(b) (4)
3005	CDRL-019: Contractor Manpower Reporting (LCCS Maintenance Only)			NSP	NSP
3005	CDRL-020: Life-Cycle Contract Support (LCCS)Report			NSP	NSP
3005	CDRL-022: Special Tools, Fixtures, TMDE Supportability Strategy (Final)	1		\$0.00	\$0.00
3005	CDRL-045: Production Drawing Package for Second Source (Optional)	1		(b) (4)	
			TOTAL CLIN 3005		(b) (4)

CLAUSES INCORPORATED BY FULL TEXT

AMCAC 52.0204-4001, IDENTIFICATION OF OZONE DEPLETING SUBSTANCES (OCT 1999)

a. The following required Class I Ozone Depleting Substances (ODS) have been identified and approved for use under performance of any resultant contract.

(X) None.

() (List any approved ODS requirements): _____

b. If during performance of the contract, an approved Class I ODS is discovered, the contractor is encouraged to notify the contracting officer immediately.

c. The ODS restrictions apply to subcontracts as well.

AMCAC 52.0223-4001, OSHA STANDARDS (OCT 1999)

Contractor must comply with all applicable OSHA standards.

Section D - Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

AMCAC 52.0247-4002, MARKING AND CONSIGNMENT INSTRUCTIONS (AUG 1999)

Marking and consignment instructions for military shipments shall conform to the current issue of MIL-STD-129 (Military Standard Marking for Shipment and Storage).

Section E - Inspection and Acceptance

INSPECTION/ACCEPTANCE

Delivery, Conditional Acceptance, and Failure of Items Subject to Product Qualification Test (PQT), First Article Test (FAT) and Conformance Inspections (CI).

Delivery of contract items which are subject to PQT, FAT, CI shall not be made until successful completion of the inspections as outlined in the QVP, and compliance with the applicable performance specification, except as provided below. The term "periodic CI" refers to all CI testing accomplished on a sample basis to include performance, environmental, and reliability testing, as opposed to the 100% CI acceptance test (AT) and Environmental Stress Screening (ESS).

- When a PQT or FAT is required, no contract items shall be delivered until the item has successfully completed the PQT or FAT per the QVP, and the IPPT has concurred on the PQT or FAT Report.
- After successful completion of the PQT, FAT, or initial periodic CI, delivery to the Government of lots between those where periodic CI is required is authorized, but acceptance is conditional pending the results of the subsequent CI. Delivery of product related to the lot that has been selected for the periodic CI shall not be delivered to the Government until all tests associated with the lot have been successfully completed. Every unit shall pass AT prior to delivery.
- In the event of a CI lot failure, the contractor shall perform a failure analysis and report each failure as required in the statement of work. Government acceptance is discontinued until satisfactory resolution of the failure, and concurrence by the IPPT on the failed item analysis report (FIAR); release under any other conditions is subject to approval of the contracting officer. The Government shall have the right to revoke acceptance of any and all items that may contain the root cause failure mode and to require the contractor to replace or correct at his expense any and all affected units. If corrective action is authorized, any such action may be performed by the contractor at destination, or the affected items may be returned to the contractor subject to approval of the contracting officer, with transportation costs to and from destination at the contractor's expense.
- When shipment has been made of items represented by samples which have failed a periodic CI, the contractor shall notify the contracting officer in writing, with copy to the ACO and PM representative; notification shall indicate the nature of the failure and shipments made, to include consignees, date of shipments, carriers, waybill numbers, serial numbers of all affected items and total quantity. The government reserves the right to return the shipments or any portion thereof to the contractor at contractor's expense.
- The contractor shall provide the cognizant Government quality assurance representative (QAR) with written notice of the time and place for each periodic CI. This notice shall be provided at least two (2) working days prior to start of each CI if the QAR is in residence at the contractor's facility or seven (7) working days prior to start of each CI if the QAR is not in residence at the contractor's facility. The contractor shall provide within forty-eight (48) hours of completion of each CI, written notification to the QAR the time and date of completion, and whether or not the inspections have been passed.
- Periodic CI, to include approval and Government acceptance of any associated failure reports, shall be completed within sixty (60) days of sample selection for periodic environmental and performance CI, and within one hundred and twenty (120) days of sample selection for reliability CI. Failure to complete CI within these time periods shall be grounds for revoking acceptance of all units accepted since the last successful periodic CI and shall be deemed a failure to make delivery within the meaning of the Default clause of this contract and the contract may be subject to termination for default.

- In the event of a CI (Reliability) lot failure, the Government may, with contractor concurrence, agree to accept consideration in lieu of correcting units that have already been delivered to the Government. The following calculation shall be used to determine the amount of consideration. The number of units in the below calculation shall be all units delivered since the last successful CI (Reliability) test, or any other number of units as agreed to by the Government. For image tubes, the hours used on each tube in calculating $MTTF_{demonstrated}$ shall not exceed the required $MTTF$.

$$\text{Consideration} = \frac{(MTTF_{required} - MTTF_{demonstrated})}{MTBF_{required}} * \text{\#units} * \text{cost per unit}$$

The rights and remedies of the Government provided in this clause shall not be exclusive, and are in addition to any other rights and remedies provided by law under this contract.

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
1001	Origin	Government	Destination	Government
1001AA	Origin	Government	Destination	Government
1001AB	Origin	Government	Destination	Government
1001AC	Origin	Government	Destination	Government
1002	Origin	Government	Destination	Government
1003	Origin	Government	Destination	Government
1004	Origin	Government	Destination	Government
1005	Origin	Government	Destination	Government
2001	Origin	Government	Destination	Government
2002	Origin	Government	Destination	Government
2003	Origin	Government	Destination	Government
2004	Origin	Government	Destination	Government
2005	Origin	Government	Destination	Government
3001	Origin	Government	Destination	Government
3002	Origin	Government	Destination	Government
3003	Origin	Government	Destination	Government
3004	Origin	Government	Destination	Government
3005	Origin	Government	Destination	Government
3006	Origin	Government	Destination	Government
3007	Origin	Government	Destination	Government

CLAUSES INCORPORATED BY REFERENCE

52.246-2	Inspection Of Supplies--Fixed Price	AUG 1996
52.246-16	Responsibility For Supplies	APR 1984
252.246-7000	Material Inspection And Receiving Report	MAR 2008

CLAUSES INCORPORATED BY FULL TEXT

52.246-11 HIGHER-LEVEL CONTRACT QUALITY (FEB 1999)

The Contractor shall comply with the higher-level quality standard selected below.

Title	Number	Date	Tailoring
Quality Management Systems - Requirements	ISO 9001:2008	2008	N/A

(End of clause)

Section F - Deliveries or Performance

SHIPPING INSTRUCTIONS

F-1 PQT hardware shall be delivered in accordance with the agreed upon qualification schedule in the Quality Validation Plan and in accordance to the timeline provided in the ENVG Statement of work unless otherwise agreed upon by the Government. Delivery will be specified in individual delivery orders.

F-2 FAR 52.247-29 FOB ORIGIN is acceptable for hardware deliverables (CLIN 0001AA, CLIN0002AA through 0002AG, CLIN0003AA through 0003AG). Spares that meet the requirement of F-4 of this section shall be shipped FOB ORIGIN.

FAR 52.247-34 FOB DESTINATION – Documentation deliverables will be FOB Destination .

F-3 REMOVED

F-4 - All Night Vision Systems and Image Intensifier Tubes will be Category IV Items for shipment purposes in accordance with Defense Transportation Regulation (DTR) DOD Regulation 4500.9-R (Nov 2004) – Part II Cargo Movement, Chapter 205-Movement of Sensitive Conventional Arms, Ammunition and Explosives, Classified (Secret and Confidential) and Controlled Cryptographic Items Sensitive Items.

F-5 PLACE OF PERFORMANCE AND SHIPPING POINT MAR/1999
TO BE COMPLETED AT TIME OF AWARD

1. The work called for herein will be performed by the contractor at the following location(s):

Location of Final Manufacture: -1- ____

(City, County, State)

Packaging and Packing: -2- ____

(City, County, State)

Shipping Point (at or near): -3- ____

(Street Address, City, State, Zip Code)

Producing facilities: -4- ____

(Owner, Street Address, City, State, Zip Code)

Operator: -5- ____

(Operator, Street Address, City, State, Zip Code)

Contractor's office which will receive payment, supervise and administer the contract:

-6- ____

(Street Address, City, State)

2. Contractor's address on the face page of the contract will be considered as the location of any of the above elements which are not completed to indicate a different address.

3. UNCLASSIFIED CONTRACTS. Unless the prior written approval of the Procuring Contracting Officer (PCO) is obtained, the contractor shall not change the specified place of manufacture, packaging and packing, shipping point and/or producing facilities. Additionally, if such a change is made, the Government shall have the right to deduct from the contract price any increased costs (shipping, administration, etc.) which the Government may incur as a result of the change as well as any savings (labor costs, etc.) that the Government may be entitled to under the Changes clause.

F-6 Delivery will be specified on contract modifications when options are exercised

Ship to address for test systems (0001AA) and documentation shall be:

SFAE-SDR-SSL-SMS

10170 BEACH ROAD, BLDG 325

FORT BELVOIR, VA 22060

M/F: CONTRACT W91CRB-09-R-0089
 ATTN: (b) (6)
 PHONE: (b) (6)
 DODAAC: W912H8

All other systems shall be shipped to:

PM SEQ STAGING/NET FACILITY
 15395 JOHN MARSHALL HIGHWAY
 HAYMARKET, VA 20169-2720

M/F: CONTRACT W91CRB-09-R-0089
 ATTN: (b) (6)
 PHONE: (b) (6)
 DoDAAC: W919DX

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
1001	N/A	N/A	N/A	N/A
1001AA	10-FEB-2011	66	PM SOLDIER SENSORS AND LASERS (b) (6) 10170 BEACH ROAD FORT BELVOIR VA 22060 (b) (6) FOB: Origin	W912H8
1001AA	10-MAR-2011	2	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
1001AA	11-APR-2011	21	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
1001AA	11-JUL-2011	39	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
1001AA	10-OCT-2011	39	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
1001AA	12-DEC-2011	40	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
1001AA	12-MAR-2012	13	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8

1001AB	N/A	N/A	N/A	N/A
1001AC	POP 10-MAR-2010 TO 12-MAR-2012	N/A	PM SOLDIER SENSORS AND LASERS ██████████ (b) (6) ██████████ 10170 BEACH ROAD FORT BELVOIR VA 22060 ██████████ (b) (6) ██████████ FOB: Destination	W912H8
1002	N/A	N/A	N/A	N/A
1003	N/A	N/A	N/A	N/A
1004	POP 10-MAR-2010 TO 09-MAR-2011	N/A	PM SOLDIER SENSORS AND LASERS ██████████ (b) (6) ██████████ 10170 BEACH ROAD FORT BELVOIR VA 22060 ██████████ (b) (6) ██████████ FOB: Origin	W912H8
1005	POP 10-MAR-2010 TO 09-MAR-2011	N/A	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
2001	POP 10-MAR-2011 TO 09-MAR-2012	N/A	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
2002	N/A	N/A	N/A	N/A
2003	POP 10-MAR-2011 TO 09-MAR-2012	N/A	PM SOLDIER SENSORS AND LASERS ██████████ (b) (6) ██████████ 10170 BEACH ROAD FORT BELVOIR VA 22060 ██████████ (b) (6) ██████████ FOB: Destination	W912H8
2004	POP 10-MAR-2011 TO 09-MAR-2012	N/A	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
2005	POP 10-MAR-2011 TO 09-MAR-2012	N/A	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
3001	POP 10-MAR-2012 TO 09-MAR-2013	N/A	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
3002	N/A	N/A	N/A	N/A
3003	N/A	N/A	N/A	N/A
3004	POP 10-MAR-2012 TO 09-MAR-2013	N/A	PM SOLDIER SENSORS AND LASERS ██████████ (b) (6) ██████████ 10170 BEACH ROAD FORT BELVOIR VA 22060 ██████████ (b) (6) ██████████ FOB: Destination	W912H8

3005	POP 10-MAR-2012 TO 09-MAR-2013	N/A	(SAME AS PREVIOUS LOCATION) FOB: Destination	W912H8
3006	POP 10-MAR-2012 TO 09-MAR-2013	N/A	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8
3007	POP 10-MAR-2012 TO 09-MAR-2013	N/A	(SAME AS PREVIOUS LOCATION) FOB: Origin	W912H8

CLAUSES INCORPORATED BY REFERENCE

52.211-17	Delivery of Excess Quantities	SEP 1989
52.242-15	Stop-Work Order	AUG 1989
52.242-17	Government Delay Of Work	APR 1984
52.247-34	F.O.B. Destination	NOV 1991
52.247-48	F.O.B. Destination--Evidence Of Shipment	FEB 1999

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 2102035000001D1DB252860140.0031CA744R00MIPR0JAPGJ00710S41LES19130
 COST CODE: 744R00
 AMOUNT: (b) (4)
 CIN W91231201080291001AA: (b) (4)
 CIN W91231201080291001AC: (b) (4)

CLIN	JOB ORDER	FUNDS EXP. DATE	FUNDED QTY	FUNDED AMT
1001AA	0S41LE	30-SEP-2012		
1001AC	0S41LE	30-SEP-2012		

CLAUSES INCORPORATED BY REFERENCE

252.232-7003 Electronic Submission of Payment Requests and Receiving Reports MAR 2008

CLAUSES INCORPORATED BY FULL TEXT

WIDE AREA WORKFLOW (WAWF) INFORMATION AND INSTRUCTION (MAY 2009)

As prescribed in DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports, contractors shall submit payment requests and receiving reports using WAWF. WAWF is a secure web-based system for electronic invoicing, receipt and acceptance located at <https://wawf.eb.mil>. Contractors can register to use WAWF on the Internet for no charge and ensure an electronic business point of contact (POC) is designated in the Central Contractor Registration site at <http://www.ccr.gov> within ten (10) calendar days after award. WAWF training is provided at <http://www.wawftraining.com/>. This application allows contractor submittal and tracking of invoices and receipt/acceptance documents. Questions relating to system setup and training can be directed to the associated site help desks and the Army WAWF Help Desk which provides support for all users as follows. Questions can also be sent via email to: cco-ec-army-wawf-helpdesk@dfas.mil.

Hours of Operation: Monday – Friday, 0630-1800 EDT
 Phone Numbers: Toll Free: 1-877-232-9293
 Comm: 1-317-510-0625 or DSN: 699-0625

Important Information:

Please submit your invoice/receiving report in WAWF when you ship your items. Otherwise, when your delivery arrives, there is nothing to receive your shipment against if the information has not been entered in WAWF.

Include the Purchase Request (PR) number in the Line Item Description. This is found under the Line Item Description on this contract/order.

WAWF is the preferred method to electronically process vendor request for payment. It allows vendors to submit and track invoices and receipt/acceptance documents electronically.

WAWF Instructions:

Questions concerning payments should be directed to the Defense Finance and Accounting Service (DFAS):

DFAS Columbus Center South – HQ0338
 South Entitlement Operations
 P.O. Box 182264
 Columbus, OH 43218-2264
 Telephone Inquiries: 1-800-756-4571
 Fax: 877-426-4270

Note: Vendor, please have your purchase/contract/delivery order number(s) ready when calling about payments.

The following Codes and information will be required to assure successful flow of WAWF comments:

TYPE OF DOCUMENT

- Commercial Item Financing
- Construction Invoice (Contractor Only)
- Invoice (Contractor Only)
- Invoice and Receiving Report Combo (Supplies) - OR - Supplies and FFP Services (check one)
- Invoice as 2-in-1 (Services Only)
- Performance Based Payment (Government Only)
- Progress Payment (Government Only)
- Cost Voucher (All Cost Reimbursable or T&M)
- Receiving Report (Government Only)
- Receiving Report With Unique Identification (UID) Data (Government Only)

UID is a new globally unique "art identifier" containing data elements used to track DoD parts through their life cycle.

- Summary Cost Voucher (Government Only)

Cage Code: 13567

Issue By DoDAAC: W91CRB

Admin By DoDAAC: S5111A

Inspect By DoDAAC: S5111A

Accept By DoDAAC: S5111A

Accept Reviewer/Approver DoDAAC: _____ (Enter DCAA Office for Cost Reimbursable and T&M contracts (HAAXXX – in lieu of "X" – enter digits of the assigned DCAA office))

Ship to DoDAAC: W919DX

Payment Office Fiscal Station Code: HQ0338

Email Addresses for Points of Contact (when determined):

Acceptor: TBD
 Receiving Office: (b) (6)
 Contract Administrator: TBD
 Contracting Officer: susan.greider@us.army.mil
 Addition POC: debra.morrow@us.army.mil

AMCAC 52.0242-4001, INSTRUCTIONS TO PAYING OFFICE AND ADMINISTRATIVE CONTRACTING OFFICE (AUG 1999)

Contracting Officer's Representative (COR):

Point of Contact: (b) (6)
 Phone: (b) (6)
 Fax: 703-704-0037
 E-Mail: (b) (6)
 Mailing Address: APM Soldier Sensors & Lasers
 Fort Belvoir, VA 22060

Alternate COR(ACOR):

Point of Contact: (b) (6)
 Phone: (b) (6)
 E-Mail: (b) (6)
 Mailing Address: APM Soldier Sensors & Lasers
 Fort Belvoir, VA 22060

a. The Contracting Office representative is:

Contract Specialist: Debbie Morrow
 Organization Code: CCRD-AP-BA
 Telephone Number: 410-278-2509
 Fax Number: 410-306-3848
 Email: debra.morrow@us.army.mil

b. Payment to the contractor shall be made in accordance with FAR Subpart 32.11, Electronic Funds Transfer.

c. Paying Office Information:

DFAS Columbus Center South – HQ0338
 South Entitlement Operations
 PO Box 182264
 Telephone Inquiries: 1-800-756-4571
 Fax: 877-426-4270

Section H - Special Contract Requirements

DISCLOSURE OF UNIT PRICE INFO

This constitutes notification pursuant to Executive Order 12600, Pre-Disclosure Notification Procedures for Confidential Commercial Information (June 23, 1987), of our intention to release unit prices in response to a request under the Freedom of Information Act, 5 USC 552. Unit price is defined as the contract price per unit or item purchased and that data is located at Section B. THE GOVERNMENT CONSIDERS ALL OBJECTION TO BE WAIVED UNLESS THE CONTRACTING OFFICER IS NOTIFIED (IN WRITING WITH A STATEMENT OF ALL GROUNDS UPON WHICH DISCLOSURE IS OPPOSED) OF YOUR OBJECTION TO SUCH RELEASE PRIOR TO SOLICITATION CLOSING DATE.

CLAUSES INCORPORATED BY REFERENCE

252.204-7005

Oral Attestation of Security Responsibilities

NOV 2001

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	SEP 2006
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2007
52.203-13	Contractor Code of Business Ethics and Conduct	DEC 2008
52.204-2	Security Requirements	AUG 1996
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.204-7	Central Contractor Registration	APR 2008
52.204-10	Reporting Subcontract Awards	SEP 2007
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	SEP 2006
52.211-5	Material Requirements	AUG 2000
52.211-15	Defense Priority And Allocation Requirements	APR 2008
52.215-2	Audit and Records--Negotiation	MAR 2009
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-11	Price Reduction for Defective Cost or Pricing Data-- Modifications	OCT 1997
52.215-13	Subcontractor Cost or Pricing Data--Modifications	OCT 1997
52.215-14	Integrity of Unit Prices	OCT 1997
52.219-4	Notice of Price Evaluation Preference for HUBZone Small Business Concerns	JUL 2005
52.219-8	Utilization of Small Business Concerns	MAY 2004
52.219-9 Alt II (Dev)	Small Business Subcontracting Plan (Apr 2008) Alternate II (Deviation)	OCT 2001
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.219-28	Post-Award Small Business Program Rerepresentation	APR 2009
52.222-3	Convict Labor	JUN 2003
52.222-19	Child Labor -- Cooperation with Authorities and Remedies	FEB 2008
52.222-20	Walsh-Healey Public Contracts Act	DEC 1996
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	MAR 2007
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-39	Notification of Employee Rights Concerning Payment of Union Dues or Fees	DEC 2004
52.222-50	Combating Trafficking in Persons	FEB 2009
52.222-54	Employment Eligibility Verification	JAN 2009
52.223-6	Drug-Free Workplace	MAY 2001
52.223-14	Toxic Chemical Release Reporting	AUG 2003

52.225-13	Restrictions on Certain Foreign Purchases	JUN 2008
52.227-1	Authorization and Consent	DEC 2007
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	DEC 2007
52.229-3	Federal, State And Local Taxes	APR 2003
52.232-1	Payments	APR 1984
52.232-8	Discounts For Prompt Payment	FEB 2002
52.232-11	Extras	APR 1984
52.232-17	Interest	OCT 2008
52.232-23 Alt I	Assignment of Claims (Jan 1986)- Alternate I	APR 1984
52.232-25	Prompt Payment	OCT 2008
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.242-2	Production Progress Reports	APR 1991
52.242-13	Bankruptcy	JUL 1995
52.243-1	Changes--Fixed Price	AUG 1987
52.244-2	Subcontracts	JUN 2007
52.244-6	Subcontracts for Commercial Items	MAR 2009
52.245-1	Government Property	JUN 2007
52.245-9	Use And Charges	JUN 2007
52.246-23	Limitation Of Liability	FEB 1997
52.247-68	Report of Shipment (REPSHIP)	FEB 2006
52.249-2	Termination For Convenience Of The Government (Fixed-Price)	MAY 2004
52.249-8	Default (Fixed-Price Supply & Service)	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991
252.203-7000	Requirements Relating to Compensation of Former DoD Officials	JAN 2009
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2008
252.203-7002	Requirement to Inform Employees of Whistleblower Rights	JAN 2009
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	SEP 2007
252.204-7005	Oral Attestation of Security Responsibilities	NOV 2001
252.204-7006	Billing Instructions	OCT 2005
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.211-7005	Substitutions for Military or Federal Specifications and Standards	NOV 2005
252.211-7006	Radio Frequency Identification	FEB 2007
252.211-7007	Reporting of Government-Furnished Equipment in the DoD Item Unique Identification (IUID) Registry	NOV 2008
252.215-7000	Pricing Adjustments	DEC 1991
252.217-7001	Surge Option	AUG 1992
252.219-7003	Small Business Subcontracting Plan (DOD Contracts)	APR 2007
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7001	Buy American Act And Balance Of Payments Program	JAN 2009
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003

252.225-7004	Report of Contract Performance Outside the United States and	MAY 2007
	Canada--Submission after Award	
252.225-7006	Quarterly Reporting of Actual Contract Performance Outside	MAY 2007
	the United States	
252.225-7012	Preference For Certain Domestic Commodities	DEC 2008
252.226-7001	Utilization of Indian Organizations and Indian-Owned	SEP 2004
	Economic Enterprises, and Native Hawaiian Small Business	
	Concerns	
252.227-7013	Rights in Technical Data--Noncommercial Items	NOV 1995
252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7025	Limitations on the Use or Disclosure of Government-	JUN 1995
	Furnished Information Marked with Restrictive Legends	
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.232-7010	Levies on Contract Payments	DEC 2006
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial	AUG 2009
	Components (DoD Contracts)	
252.246-7001	Alt II Warranty Of Data (Dec 1991) - Alternate II	DEC 1991
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED BY FULL TEXT

52.203-14 DISPLAY OF HOTLINE POSTER(S) (DEC 2007)

(a) Definition.

United States, as used in this clause, means the 50 States, the District of Columbia, and outlying areas.

(b) Display of fraud hotline poster(s). Except as provided in paragraph (c)--

(1) During contract performance in the United States, the Contractor shall prominently display in common work areas within business segments performing work under this contract and at contract work sites--

(i) Any agency fraud hotline poster or Department of Homeland Security (DHS) fraud hotline poster identified in paragraph (b)(3) of this clause; and

(ii) Any DHS fraud hotline poster subsequently identified by the Contracting Officer.

(2) Additionally, if the Contractor maintains a company website as a method of providing information to employees, the Contractor shall display an electronic version of the poster(s) at the website.

(3) Any required posters may be obtained as follows:

Downloadable Poster(s) may be Obtained from:

http://www.us-cert.gov/reading_room/distributable.html

(c) If the Contractor has implemented a business ethics and conduct awareness program, including a reporting mechanism, such as a hotline poster, then the Contractor need not display any agency fraud hotline posters as required in paragraph (b) of this clause, other than any required DHS posters.

(d) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (d), in all subcontracts that exceed \$5,000,000, except when the subcontract-

(1) Is for the acquisition of a commercial item; or

(2) Is performed entirely outside the United States.

(End of clause)

52.209-3 FIRST ARTICLE APPROVAL -- CONTRACTOR TESTING (SEP 1989) - ALTERNATE II (SEP 1989)

(a) The Contractor shall test the number of unit(s) of Lot/Item specified in the SOW as specified in the Quality Validation Plan (QVP) of this contract. At least 10 calendar days before the beginning of first article tests, the Contractor shall notify the Contracting Officer, in writing, of the time and location of the testing so that the Government may witness the tests.

(b) For information regarding report submission requirements, refer to CDRL-014. The Contractor shall submit the first article test report within 21 days after completion of tests/inspections to PEO PM-SSL/PM Soldier Maneuver Sensors (SMS), PEO Soldier, Ft. Belvoir, VA 22060-5800 marked "FIRST ARTICLE TEST REPORT: Contract No. , Lot/Item No. " Within 21 calendar days after the Government receives the test report, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.

(c) If the first article is disapproved, the Contractor, upon Government request, shall repeat any or all first article tests. After each request for additional tests, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following a disapproval. The Contractor shall then conduct the tests and deliver another report to the Government under the terms and conditions and within the time specified by the Government. The Government shall take action on this report within the time specified in paragraph (b) above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule, or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article report on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, and if the approved first article is not consumed or destroyed in testing, the Contractor may deliver the approved first article as part of the contract quantity if it meets all contract requirements for acceptance.

(f) If the Government does not act within the time specified in paragraph (b) or (c) above, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) Before first article approval, the Contracting Officer may, by written authorization, authorize the Contractor to acquire specific materials or components or to commence production to the extent essential to meet the delivery

schedules. Until first article approval is granted, only costs for the first article and costs incurred under this authorization are allocable to this contract for (1) progress payments, or (2) termination settlements if the contract is terminated for the convenience of the Government. If first article tests reveal deviations from contract requirements, the Contractor shall, at the location designated by the Government, make the required changes or replace all items produced under this contract at no change in the contract price.

(h) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the offeror/contractor and have been accepted by the Government. The offeror/contractor may request a waiver.

(End of clause)

52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

(End of clause)

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 days; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed three years.

(End of clause)

52.243-7 NOTIFICATION OF CHANGES (APR 1984)

(a) Definitions.

"Contracting Officer," as used in this clause, does not include any representative of the Contracting Officer.

"Specifically authorized representative (SAR)," as used in this clause, means any person the Contracting Officer has so designated by written notice (a copy of which shall be provided to the Contractor) which shall refer to this subparagraph and shall be issued to the designated representative before the SAR exercises such authority.

(b) Notice. The primary purpose of this clause is to obtain prompt reporting of Government conduct that the Contractor considers to constitute a change to this contract. Except for changes identified as such in writing and signed by the Contracting Officer, the Contractor shall notify the Administrative Contracting Officer in writing, within 30 calendar days from the date that the Contractor identifies any Government conduct (including actions,

inactions, and written or oral communications) that the Contractor regards as a change to the contract terms and conditions. On the basis of the most accurate information available to the Contractor, the notice shall state-

- (1) The date, nature, and circumstances of the conduct regarded as a change;
- (2) The name, function, and activity of each Government individual and Contractor official or employee involved in or knowledgeable about such conduct;
- (3) The identification of any documents and the substance of any oral communication involved in such conduct;
- (4) In the instance of alleged acceleration of scheduled performance or delivery, the basis upon which it arose;
- (5) The particular elements of contract performance for which the Contractor may seek an equitable adjustment under this clause, including--
 - (i) What contract line items have been or may be affected by the alleged change;
 - (ii) What labor or materials or both have been or may be added, deleted, or wasted by the alleged change;
 - (iii) To the extent practicable, what delay and disruption in the manner and sequence of performance and effect on continued performance have been or may be caused by the alleged change;
 - (iv) What adjustments to contract price, delivery schedule, and other provisions affected by the alleged change are estimated; and
- (6) The Contractor's estimate of the time by which the Government must respond to the Contractor's notice to minimize cost, delay or disruption of performance.

(c) Continued performance. Following submission of the notice required by (b) above, the Contractor shall diligently continue performance of this contract to the maximum extent possible in accordance with its terms and conditions as construed by the Contractor, unless the notice reports a direction of the Contracting Officer or a communication from a SAR of the Contracting Officer, in either of which events the Contractor shall continue performance; provided, however, that if the Contractor regards the direction or communication as a change as described in (b) above, notice shall be given in the manner provided. All directions, communications, interpretations, orders and similar actions of the SAR shall be reduced to writing and copies furnished to the Contractor and to the Contracting Officer. The Contracting Officer shall countermand any action which exceeds his authority of the SAR.

(d) Government response. The Contracting Officer shall promptly, within 30 calendar days after receipt of notice, respond to the notice in writing. In responding, the Contracting Officer shall either-

- (1) Confirm that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance;
- (2) Countermand any communication regarded as a change;
- (3) Deny that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance; or
- (4) In the event the Contractor's notice information is inadequate to make a decision under (1), (2), or (3) above, advise the Contractor what additional information is required, and establish the date by which it should be furnished and the date thereafter by which the Government will respond.

(e) Equitable adjustments.

(1) If the Contracting Officer confirms that Government conduct effected a change as alleged by the Contractor, and the conduct causes an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether changed or not changed by such conduct, an equitable adjustment shall be made--

- (i) In the contract price or delivery schedule or both; and
- (ii) In such other provisions of the contract as may be affected.

(2) The contract shall be modified in writing accordingly. In the case of drawings, designs or specifications which are defective and for which the Government is responsible, the equitable adjustment shall include the cost and time extension for delay reasonably incurred by the Contractor in attempting to comply with the defective drawings, designs or specifications before the Contractor identified, or reasonably should have identified, such defect. When the cost of property made obsolete or excess as a result of a change confirmed by the Contracting Officer under this clause is included in the equitable adjustment, the Contracting Officer shall have the right to prescribe the manner of disposition of the property. The equitable adjustment shall not include increased costs or time extensions for delay resulting from the Contractor's failure to provide notice or to continue performance as provided, respectively, in (b) and (c) above.

Note: The phrases "contract price" and "cost" wherever they appear in the clause, may be appropriately modified to apply to cost-reimbursement or incentive contracts, or to combinations thereof.

(End of clause)

52.248-1 VALUE ENGINEERING (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any net acquisition savings realized from accepted VECP's, in accordance with the incentive sharing rates in paragraph (f) below.

(b) Definitions. "Acquisition savings," as used in this clause, means savings resulting from the application of a VECP to contracts awarded by the same contracting office or its successor for essentially the same unit. Acquisition savings include--

- (1) Instant contract savings, which are the net cost reductions on this, the instant contract, and which are equal to the instant unit cost reduction multiplied by the number of instant contract units affected by the VECP, less the Contractor's allowable development and implementation costs;
- (2) Concurrent contract savings, which are net reductions in the prices of other contracts that are definitized and ongoing at the time the VECP is accepted; and
- (3) Future contract savings, which are the product of the future unit cost reduction multiplied by the number of future contract units in the sharing base. On an instant contract, future contract savings include savings on increases in quantities after VECP acceptance that are due to contract modifications, exercise of options, additional orders, and funding of subsequent year requirements on a multiyear contract.

"Collateral costs," as used in this clause, means agency cost of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contracting office" includes any contracting office that the acquisition is transferred to, such as another branch of the agency or another agency's office that is performing a joint acquisition action.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Future unit cost reduction," as used in this clause, means the instant unit cost reduction adjusted as the Contracting Officer considers necessary for projected learning or changes in quantity during the sharing period. It is calculated at the time the VECP is accepted and applies either (1) throughout the sharing period, unless the Contracting Officer decides that recalculation is necessary because conditions are significantly different from those previously anticipated or (2) to the calculation of a lump-sum payment, which cannot later be revised.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistics support. The term does not include the normal administrative costs of processing the VECP or any increase in this contract's cost or price resulting from negative instant contract savings.

"Instant contract," as used in this clause, means this contract, under which the VECP is submitted. It does not include increases in quantities after acceptance of the VECP that are due to contract modifications, exercise of options, or additional orders. If this is a multiyear contract, the term does not include quantities funded after VECP acceptance. If this contract is a fixed-price contract with prospective price redetermination, the term refers to the period for which firm prices have been established.

"Instant unit cost reduction" means the amount of the decrease in unit cost of performance (without deducting any Contractor's development or implementation costs) resulting from using the VECP on this, the instant contract. If this is a service contract, the instant unit cost reduction is normally equal to the number of hours per line item task saved by using the VECP on this contract, multiplied by the appropriate contract labor rate.

"Negative instant contract savings" means the increase in the cost or price of this contract when the acceptance of a VECP results in an excess of the Contractor's allowable development and implementation costs over the product of the instant unit cost reduction multiplied by the number of instant contract units affected.

"Net acquisition savings" means total acquisition savings, including instant, concurrent, and future contract savings, less Government costs.

"Sharing base," as used in this clause, means the number of affected end items on contracts of the contracting office accepting the VECP.

Sharing period, as used in this clause, means the period beginning with acceptance of the first unit incorporating the VECP and ending at a calendar date or event determined by the contracting officer for each VECP.

"Unit," as used in this clause, means the item or task to which the Contracting Officer and the Contractor agree the VECP applies.

"Value engineering change proposal (VECP)" means a proposal that-

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the overall projected cost to the agency without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only;

(ii) In research and development (R&D) end items or R&D test quantities that is due solely to results of previous testing under this contract; or

(iii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (8) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and the proposed requirement, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, the effect of the change on the end item's performance, and any pertinent objective test data.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) Identification of the unit to which the VECP applies.

(4) A separate, detailed cost estimate for (i) the affected portions of the existing contract requirement and (ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under the Subcontracts paragraph of this clause, below.

(5) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(6) A prediction of any effects the proposed change would have on collateral costs to the agency.

(7) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(8) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Contracting Officer, unless this contract states otherwise. If this contract is administered by other than the contracting office, the Contractor shall submit a copy of the VECP simultaneously to the Contracting Officer and to the Administrative Contracting Officer.

(e) Government action. (1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

(2) If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause and made either before or within a reasonable time after contract performance is completed. Until such a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing rates. If a VECP is accepted, the Contractor shall share in net acquisition savings according to the percentages shown in the table below. The percentage paid the Contractor depends upon (1) this contract's type (fixed-price, incentive, or cost-reimbursement), (2) the sharing arrangement specified in paragraph (a) above (incentive, program requirement, or a combination as delineated in the Schedule), and (3) the source of the savings (the instant contract, or concurrent and future contracts), as follows:

CONTRACTOR'S SHARE OF NET ACQUISITION SAVINGS

(Figures in percent)

Contract Type	Incentive (Voluntary)		Program Requirement (Mandatory)	
	Instant Contract Rate	Concurrent and Future Contract Rate	Instant Contract Rate	Concurrent and Future Contract Rate
Fixed-price (includes fixed-price-award-fee; excludes other fixed-price incentive contracts)	(1) 50	(1) 50	(1) 25	25
Incentive (fixed-price or cost) (other than award fee)	(2)	(1) 50	(2)	25
Cost-reimbursement (includes cost-plus-award-fee; excludes other cost-type incentive Contracts)	(3) 25	(3) 25	15	15

(1) The Contracting Officer may increase the Contractor's sharing rate to as high as 75 percent for each VECP.

(2) Same sharing arrangement as the contract's profit or fee adjustment formula.

(3) The Contracting Officer may increase the Contractor's sharing rate to as high as 50 percent for each VECP.

(g) Calculating net acquisition savings.

(1) Acquisition savings are realized when (i) the cost or price is reduced on the instant contract, (ii) reductions are negotiated in concurrent contracts, (iii) future contracts are awarded, or (iv) agreement is reached on a lump-sum payment for future contract savings (see subparagraph (i)(4) below). Net acquisition savings are first realized, and the Contractor shall be paid a share, when Government costs and any negative instant contract savings have been fully offset against acquisition savings.

(2) Except in incentive contracts, Government costs and any price or cost increases resulting from negative instant contract savings shall be offset against acquisition savings each time such savings are realized until they are fully offset. Then, the Contractor's share is calculated by multiplying net acquisition savings by the appropriate Contractor's percentage sharing rate (see paragraph (f) above). Additional Contractor shares of net acquisition savings shall be paid to the Contractor at the time realized.

(3) If this is an incentive contract, recovery of Government costs on the instant contract shall be deferred and offset against concurrent and future contract savings. The Contractor shall share through the contract incentive structure in savings on the instant contract items affected. Any negative instant contract savings shall be added to the target cost or to the target price and ceiling price, and the amount shall be offset against concurrent and future contract savings.

(4) If the Government does not receive and accept all items on which it paid the Contractor's share, the Contractor shall reimburse the Government for the proportionate share of these payments.

(h) Contract adjustment. The modification accepting the VECP (or a subsequent modification issued as soon as possible after any negotiations are completed) shall--

(1) Reduce the contract price or estimated cost by the amount of instant contract savings, unless this is an incentive contract;

(2) When the amount of instant contract savings is negative, increase the contract price, target price and ceiling price, target cost, or estimated cost by that amount;

(3) Specify the Contractor's dollar share per unit on future contracts, or provide the lump-sum payment;

(4) Specify the amount of any Government costs or negative instant contract savings to be offset in determining net acquisition savings realized from concurrent or future contract savings and

(5) Provide the Contractor's share of any net acquisition savings under the instant contract in accordance with the following:

(i) Fixed-price contracts--add to contract price.

(ii) Cost-reimbursement contracts--add to contract fee.

(i) Concurrent and future contract savings.

(1) Payments of the Contractor's share of concurrent and future contract savings shall be made by a modification to the instant contract in accordance with subparagraph (h)(5) above. For incentive contracts, shares shall be added as a separate firm-fixed-price line item on the instant contract. The Contractor shall maintain records adequate to identify the first delivered unit for 3 years after final payment under this contract.

(2) The Contracting Officer shall calculate the Contractor's share of concurrent contract savings by (i) subtracting from the reduction in price negotiated on the concurrent contract any Government costs or negative instant contract savings not yet offset and (ii) multiplying the result by the Contractor's sharing rate.

(3) The Contracting Officer shall calculate the Contractor's share of future contract savings by (i) multiplying the future unit cost reduction by the number of future contract units scheduled for delivery during the sharing period, (ii) subtracting any Government costs or negative instant contract savings not yet offset, and (iii) multiplying the result by the Contractor's sharing rate.

(4) When the Government wishes and the Contractor agrees, the Contractor's share of future contract savings may be paid in a single lump sum rather than in a series of payments over time as future contracts are awarded. Under this alternate procedure, the future contract savings may be calculated when the VECP is accepted, on the basis of the

Contracting Officer's forecast of the number of units that will be delivered during the sharing period. The Contractor's share shall be included in a modification to this contract (see subparagraph (h)(3) above) and shall not be subject to subsequent adjustment.

(5) Alternate no-cost settlement method. When, in accordance with subsection 48.1044 of the Federal Acquisition Regulation, the Government and the Contractor mutually agree to use the no-cost settlement method, the following applies:

(i) The Contractor will keep all the savings on the instant contract and on its concurrent contracts only.

(ii) The Government will keep all the savings resulting from concurrent contracts placed on other sources, savings from all future contracts, and all collateral savings.

(j) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount, as specified in paragraph (h)(5) of this clause, by a rate from 20 to 100 percent, as determined by the Contracting Officer, of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price, target price, target cost, or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer will be the sole determiner of the amount of collateral savings.

(k) Relationship to other incentives. Only those benefits of an accepted VECP not rewardable under performance, design-to-cost (production unit cost, operating and support costs, reliability and maintainability), or similar incentives shall be rewarded under this clause. However, the targets of such incentives affected by the VECP shall not be adjusted because of VECP acceptance. If this contract specifies targets but provides no incentive to surpass them, the value engineering sharing shall apply only to the amount of achievement better than target.

(l) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$100,000 or more and may include one in subcontracts of lesser value. In calculating any adjustment in this contract's price for instant contract savings (or negative instant contract savings), the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs, and any value engineering incentive payments to a subcontractor, clearly resulting from a VECP accepted by the Government under this contract. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that the payments shall not reduce the Government's share of concurrent or future contract savings or collateral savings.

(m) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering clause of contract, shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations."

If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

This contract incorporates one or more clauses 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. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://farsite.hill.af.mil>

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

252.211-7003 ITEM IDENTIFICATION AND VALUATION (AUG 2008)

(a) Definitions. As used in this clause'

Automatic identification device means a device, such as a reader or interrogator, used to retrieve data encoded on machine-readable media.

Concatenated unique item identifier means--

(1) For items that are serialized within the enterprise identifier, the linking together of the unique identifier data elements in order of the issuing agency code, enterprise identifier, and unique serial number within the enterprise identifier; or

(2) For items that are serialized within the original part, lot, or batch number, the linking together of the unique identifier data elements in order of the issuing agency code; enterprise identifier; original part, lot, or batch number; and serial number within the original part, lot, or batch number.

Data qualifier means a specified character (or string of characters) that immediately precedes a data field that defines the general category or intended use of the data that follows.

DoD recognized unique identification equivalent" means a unique identification method that is in commercial use and has been recognized by DoD. All DoD recognized unique identification equivalents are listed at http://www.acq.osd.mil/dpap/pdi/uid/iuid_equivalents.html

DoD unique item identification means a system of marking items delivered to DoD with unique item identifiers that have machine-readable data elements to distinguish an item from all other like and unlike items. For items that are serialized within the enterprise identifier, the unique item identifier shall include the data elements of the enterprise identifier and a unique serial number. For items that are serialized within the part, lot, or batch number within the enterprise identifier, the unique item identifier shall include the data elements of the enterprise identifier; the original part, lot, or batch number; and the serial number.

Enterprise means the entity (e.g., a manufacturer or vendor) responsible for assigning unique item identifiers to items.

Enterprise identifier means a code that is uniquely assigned to an enterprise by an issuing agency.

Government's unit acquisition cost means-

(1) For fixed-price type line, subline, or exhibit line items, the unit price identified in the contract at the time of delivery;

(2) For cost-type or undefinitized line, subline, or exhibit line items, the Contractor's estimated fully burdened unit cost to the Government at the time of delivery; and

(3) For items produced under a time-and-materials contract, the Contractor's estimated fully burdened unit cost to the Government at the time of delivery.

Issuing agency means an organization responsible for assigning a non-repeatable identifier to an enterprise (i.e., Dun & Bradstreet's Data Universal Numbering System (DUNS) Number, GS1 Company Prefix, or Defense Logistics Information System (DLIS) Commercial and Government Entity (CAGE) Code).

Issuing agency code means a code that designates the registration (or controlling) authority for the enterprise identifier.

Item means a single hardware article or a single unit formed by a grouping of subassemblies, components, or constituent parts.

Lot or batch number means an identifying number assigned by the enterprise to a designated group of items, usually referred to as either a lot or a batch, all of which were manufactured under identical conditions.

Machine-readable means an automatic identification technology media, such as bar codes, contact memory buttons, radio frequency identification, or optical memory cards.

Original part number means a combination of numbers or letters assigned by the enterprise at item creation to a class of items with the same form, fit, function, and interface.

Parent item means the item assembly, intermediate component, or subassembly that has an embedded item with a unique item identifier or DoD recognized unique identification equivalent.

Serial number within the enterprise identifier means a combination of numbers, letters, or symbols assigned by the enterprise to an item that provides for the differentiation of that item from any other like and unlike item and is never used again within the enterprise.

Serial number within the part, lot, or batch number means a combination of numbers or letters assigned by the enterprise to an item that provides for the differentiation of that item from any other like item within a part, lot, or batch number assignment.

Serialization within the enterprise identifier means each item produced is assigned a serial number that is unique among all the tangible items produced by the enterprise and is never used again. The enterprise is responsible for ensuring unique serialization within the enterprise identifier.

Serialization within the part, lot, or batch number means each item of a particular part, lot, or batch number is assigned a unique serial number within that part, lot, or batch number assignment. The enterprise is responsible for ensuring unique serialization within the part, lot, or batch number within the enterprise identifier.

Unique item identifier means a set of data elements marked on items that is globally unique and unambiguous. The term includes a concatenated unique item identifier or a DoD recognized unique identification equivalent.

Unique item identifier type means a designator to indicate which method of uniquely identifying a part has been used. The current list of accepted unique item identifier types is maintained at http://www.acq.osd.mil/dpap/pdi/uid/uii_types.html.

(b) The Contractor shall deliver all items under a contract line, subline, or exhibit line item.

(c) Unique item identifier.

(1) The Contractor shall provide a unique item identifier for the following:

(i) All delivered items for which the Government's unit acquisition cost is \$5,000 or more.

(ii) The following items for which the Government's unit acquisition cost is less than \$5,000:

Contract line, subline, or exhibit line item No.	Item description
TBD	

(iii) Subassemblies, components, and parts embedded within delivered items as specified in Attachment Number ----.

(2) The unique item identifier and the component data elements of the DoD unique item identification shall not change over the life of the item.

(3) Data syntax and semantics of unique item identifiers. The Contractor shall ensure that--

(i) The encoded data elements (except issuing agency code) of the unique item identifier are marked on the item using one of the following three types of data qualifiers, as determined by the Contractor:

(A) Application Identifiers (AIs) (Format Indicator 05 of ISO/IEC International Standard 15434), in accordance with ISO/IEC International Standard 15418, Information Technology--EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance and ANSI MH 10.8.2 Data Identifier and Application Identifier Standard.

(B) Data Identifiers (DIs) (Format Indicator 06 of ISO/IEC International Standard 15434), in accordance with ISO/IEC International Standard 15418, Information Technology--EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance and ANSI MH 10.8.2 Data Identifier and Application Identifier Standard.

(C) Text Element Identifiers (TEIs) (Format Indicator 12 of ISO/IEC International Standard 15434), in accordance with the Air Transport Association Common Support Data Dictionary; and

(ii) The encoded data elements of the unique item identifier conform to the transfer structure, syntax, and coding of messages and data formats specified for Format Indicators 05, 06, and 12 in ISO/IEC International Standard 15434, Information Technology--Transfer Syntax for High Capacity Automatic Data Capture Media.

(4) Unique item identifier.

(i) The Contractor shall--

(A) Determine whether to--

- (1) Serialize within the enterprise identifier;
 - (2) Serialize within the part, lot, or batch number; or
 - (3) Use a DoD recognized unique identification equivalent; and
- (B) Place the data elements of the unique item identifier (enterprise identifier; serial number; DoD recognized unique identification equivalent; and for serialization within the part, lot, or batch number only: original part, lot, or batch number) on items requiring marking by paragraph (c)(1) of this clause, based on the criteria provided in the version of MIL-STD-130, Identification Marking of U.S. Military Property, cited in the contract Schedule.
- (ii) The issuing agency code--
 - (A) Shall not be placed on the item; and
 - (B) Shall be derived from the data qualifier for the enterprise identifier.
 - (d) For each item that requires unique item identification under paragraph (c)(1)(i) or (ii) of this clause, in addition to the information provided as part of the Material Inspection and Receiving Report specified elsewhere in this contract, the Contractor shall report at the time of delivery, either as part of, or associated with, the Material Inspection and Receiving Report, the following information:
 - (1) Unique item identifier.
 - (2) Unique item identifier type.
 - (3) Issuing agency code (if concatenated unique item identifier is used).
 - (4) Enterprise identifier (if concatenated unique item identifier is used).
 - (5) Original part number (if there is serialization within the original part number).
 - (6) Lot or batch number (if there is serialization within the lot or batch number).
 - (7) Current part number (optional and only if not the same as the original part number).
 - (8) Current part number effective date (optional and only if current part number is used).
 - (9) Serial number (if concatenated unique item identifier is used).
 - (10) Government's unit acquisition cost.
 - (11) Unit of measure.
 - (e) For embedded subassemblies, components, and parts that require DoD unique item identification under paragraph (c)(1)(iii) of this clause, the Contractor shall report as part of, or associated with, the Material Inspection and Receiving Report specified elsewhere in this contract, the following information:
 - (1) Unique item identifier of the parent item under paragraph (c)(1) of this clause that contains the embedded subassembly, component, or part.
 - (2) Unique item identifier of the embedded subassembly, component, or part.

- (3) Unique item identifier type.**
- (4) Issuing agency code (if concatenated unique item identifier is used).**
- (5) Enterprise identifier (if concatenated unique item identifier is used).**
- (6) Original part number (if there is serialization within the original part number).**
- (7) Lot or batch number (if there is serialization within the lot or batch number).**
- (8) Current part number (optional and only if not the same as the original part number).**
- (9) Current part number effective date (optional and only if current part number is used).**
- (10) Serial number (if concatenated unique item identifier is used).**
- (11) Description.

** Once per item.

(f) The Contractor shall submit the information required by paragraphs (d) and (e) of this clause in accordance with the data submission procedures at http://www.acq.osd.mil/dpap/pdi/uid/data_submission_information.html.

(g) Subcontracts. If the Contractor acquires by subcontract, any item(s) for which unique item identification is required in accordance with paragraph (c)(1) of this clause, the Contractor shall include this clause, including this paragraph (g), in the applicable subcontract(s).

(End of clause)

Section J - List of Documents, Exhibits and Other Attachments

Exhibit/Attachment Table of Contents

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Exhibit A	CDRLs	107	11 Jan 2010
Exhibit B	DIDs		
Exhibit C	Test, Measurement, and Diagnostic Equipment(TMDE)	4	4 Sep 2009
Exhibit D	Purchase Description	30	18 May 2010
Exhibit E	NVThermInputs Powerpoint Slides	19	1 Dec 2009
Exhibit F	Failure Definition and Scoring Criteria (FDSC)	36	23 Mar 2006

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Attachment 1	Spares Pricing	1	
Attachment 2	DD254	6	8 Sep 2009