

<b>AWARD/CONTRACT</b>		<b>1. This Contract Is A Rated Order Under DPAS (15 CFR 700)</b>	<b>Rating</b> DOA4	<b>Page</b> 1	<b>Of</b> 59	<b>Pages</b>
<b>2. Contract (Proc. Inst. Ident.) No.</b> W56HZV-13-C-0349		<b>3. Effective Date</b> 2013AUG22	<b>4. Requisition/Purchase Request/Project No.</b> SEE SCHEDULE			
<b>5. Issued By</b> U.S. ARMY CONTRACTING COMMAND RACHEL HEANEY WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL		<b>Code</b> W56HZV	<b>6. Administered By (If Other Than Item 5)</b> DCMA MANASSAS 10500 BATTLEVIEW PKWY SUITE 200 MANASSAS VA 20109-2342		<b>Code</b> S2404A	

e-mail address: RACHEL.HEANEY@US.ARMY.MIL

<b>7. Name And Address Of Contractor (No., Street, City, County, State and Zip Code)</b> SCIENCE APPLICATIONS INTERNATIONAL CORPORATION DEFENSE SOLUTIONS SERVICES 1710 SAIC DR MCLEAN, VA 22102-3703		<b>8. Delivery</b> <input type="checkbox"/> FOB Origin <input checked="" type="checkbox"/> Other (See Below)	
		<b>9. Discount For Prompt Payment</b>	
<b>Code</b> 5UTP8		<b>10. Submit Invoices (4 Copies Unless Otherwise Specified)</b>	
<b>Facility Code</b>		<b>To The Address Shown In:</b>	
		<b>Item</b> 12	

<b>11. Ship To/Mark For</b> SEE SCHEDULE		<b>Code</b>	<b>12. Payment Will Be Made By</b> DFAS-COLUMBUS CENTER SOUTH ENTITLEMENT OPERATIONS P.O. BOX 182264 COLUMBUS OH 43218-2264 1-800-756-4571 FAX 614-693-2224		<b>Code</b> HQ0338
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<b>13. Authority For Using Other Than Full And Open Competition:</b> <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )		<b>14. Accounting And Appropriation Data</b> SEE SECTION G			
<b>15A. Item No.</b>	<b>15B. Supplies/Services</b>	<b>15C. Quantity</b>	<b>15D. Unit</b>	<b>15E. Unit Price</b>	<b>15F. Amount</b>
SEE SCHEDULE					
<b>15G. Total Amount Of Contract</b> →					\$2,499,011.70

**16. Table Of Contents**

(X)	Sec.	Description	Page(s)	(X)	Sec.	Description	Page(s)
Part I - The Schedule				Part II - Contract Clauses			
X	A	Solicitation/Contract Form	1	X	I	Contract Clauses	45
X	B	Supplies or Services and Prices/Costs	5	Part III - List Of Documents, Exhibits, And Other Attachments			
X	C	Description/Specs./Work Statement	19	X	J	List of Attachments	59
X	D	Packaging and Marking	28	Part IV - Representations And Instructions			
X	E	Inspection and Acceptance	29		K	Representations, Certifications, and Other Statements of Offerors	
X	F	Deliveries or Performance	33		L	Instrs., Conds., and Notices to Offerors	
X	G	Contract Administration Data	38		M	Evaluation Factors for Award	
X	H	Special Contract Requirements	43				

Contracting Officer Will Complete Item 17 (Sealed-Bid or Negotiated Procurement) Or 18 (Sealed-Bid Procurement) As Applicable

<b>17.</b> <input checked="" type="checkbox"/> Contractor's Negotiated Agreement (Contractor is required to sign this document and return 2 signed 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.)	<b>18.</b> <input type="checkbox"/> Sealed-Bid Award (Contractor is not required to sign this document.) Your bid on Solicitation Number _____, 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 bid, and (b) this award/contract. No further contractual document is necessary. (Block 18 should be checked only when awarding a sealed-bid contract.)
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<b>19A. Name And Title Of Signer (Type Or Print)</b>		<b>20A. Name Of Contracting Officer</b>  LYNN M. BYRNE LYNN.M.BYRNE@US.ARMY.MIL (586)282-6553	
<b>19B. Name of Contractor</b>	<b>19c. Date Signed</b>	<b>20B. United States Of America</b>	<b>20C. Date Signed</b> 2013AUG22
By _____ (Signature of person authorized to sign)		By _____ /SIGNED/ (Signature of Contracting Officer)	

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>	<b>Page 2 of 59</b>
	PIIN/SIIN W56HZV-13-C-0349 MOD/AMD	
<b>Name of Offeror or Contractor:</b> SCIENCE APPLICATIONS INTERNATIONAL CORPORATION		

SECTION A - SUPPLEMENTAL INFORMATION

Buyer Name: RACHEL HEANEY  
 Buyer Office Symbol/Telephone Number: CCTA-ASG-C/(586)282-9712  
 Type of Contract: Firm Fixed Price  
 Kind of Contract: Research and Development Contracts  
 Type of Business: Large Business Performing in U.S.  
 Surveillance Criticality Designator: C  
 Weapon System: No Identified Army Weapons Systems  
 Contract Expiration Date: 2015AUG21

\*\*\* End of Narrative A0000 \*\*\*

Regulatory Cite	Title	Date
A-1	52.204-4016 WARREN ELECTRONIC CONTRACTING	MAR/2013

(a) All Army Contracting Command - Warren (DTA) solicitations and awards are distributed on the Army Contracting Command - Warren Procurement Network (ProcNet) Business Opportunities website (<http://contracting.tacom.army.mil/opportunity.htm>) and are no longer available in hard copy. The Technical Data Packages (TDPs) and other documents, when available electronically, will be attachments or links to the solicitation package on ProcNet.

(b) You may need to use special software to view documents that we post on ProcNet. This viewing software is freeware, available for download at no cost from commercial websites like Microsoft and Adobe. In cases where such software is required, we provide a link from ProcNet to the commercial site where the software is available. Once you arrive at the software developer's site, follow its instructions to download the free viewer. You can then return to the ProcNet.

(c) Unless directed to do otherwise in Section L of this solicitation, you are required to submit your offer, bid, or quote electronically, via the Army Single Face to Industry (ASFI) Online Bid Response System (BRS). For detailed information about submitting your offer electronically, please see <http://contracting.tacom.army.mil/acqinfo/ebidnotice.htm>.

(d) Requirements for the online ASFI bid submission:

(1) You must be registered in the System for Award Management (SAM) at [www.sam.gov](http://www.sam.gov) (a Federal Government owned and operated free web site) and have a CAGE Code and CCR Marketing Partner Identification Number (MPIN).

(2) If you found the solicitation on ProcNet, use the following link to the Start Bid Page on the ASFI BRS website for this solicitation:  
[https://acquisition.army.mil/asfi/solicitation\\_view.cfm?psolicitationnbr=W56HZV13R0306](https://acquisition.army.mil/asfi/solicitation_view.cfm?psolicitationnbr=W56HZV13R0306)

(3) If you found the solicitation by searching on ASFI, you can start the online bidding process by using the Start Bid button on the ASFI Solicitation View page. You may also access the ASFI BRS by going to <https://acquisition.army.mil/asfi/> and clicking on the Contracting Opportunities Search to find the solicitation.

(4) Once in the ASFI BRS, you will be asked to enter basic information and will then be directed to upload one or more files containing your offer and information required by the solicitation.

(5) You will receive a confirmation of your bid upon completion of the bid submission process.

(6) You can find detailed BRS user instructions on the ASFI website at [https://acquisition.army.mil/asfi/BRS\\_guide.doc](https://acquisition.army.mil/asfi/BRS_guide.doc).

(e) Note to offerors:

Your attention is called to the solicitation closing date and time as stated on the cover page of this solicitation, local time for the Army Contracting Command - Warren (DTA), Michigan. In accordance with FAR 15.208(a), offerors are responsible for submitting proposals, and any revisions, and modifications, so as to be received by the Government office designated in the solicitation by the time specified.

It is the offeror's responsibility to assure their proposal is received by the date and time specified on the cover page of this solicitation. In accordance with FAR 15.208, if your proposal was not received at the initial point of entry to the Government infrastructure (in this case, received through ASFI) by the exact date and time specified on the cover page of this solicitation, it will be determined late. Proposal, as the term is used here, means ALL volumes and/or parts of the proposal.

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 3 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Note: There is no "expected" or "target" length of time for proposal submission; size and content may be factors, therefore offerors are strongly cautioned to submit their proposals allowing adequate time for submission.

Solicitations may remain posted on the AFSI Open Solicitation Web page after the solicitation closes. Even though the system will allow you to submit a proposal after the closing date/time, your proposal will be considered late and may not be considered for award. If you are responding to a Request for Proposal, your offer will not be considered if it is submitted after the closing date and time unless one of the exceptions is met at FAR 15.208(b). If you are responding to a Request for Quotation, your quote may be considered if it is received after the closing date, and it will not unduly delay award.

(f) Any award issued as a result of this solicitation will be distributed electronically. Awards posted on ProcNet represent complete OFFICIAL copies of contract awards and will include the awarded unit price. This is the notice required by Executive Order 12600 (June 23, 1987) of our intention to release unit prices in response to any request under the Freedom of Information Act (FOIA), 5 USC 552. Unit price is defined as the contract price per unit or item purchased as it appears in Section B of the contract and is NOT referring to nor does it include Cost or Pricing data/information. If you object to such release, and you intend to submit an offer, notify the contracting officer in writing prior to the closing date identified in this solicitation and include the rationale for your objection consistent with the provisions of FOIA. A release determination will be made based on rationale given.

(g) If you have questions or need help using ProcNet, call our E-commerce Contracting Help Desk at (586) 282-7059, or send an email to [usarmy.detroit.acc.mbx.wrn-web-page-request@mail.mil](mailto:usarmy.detroit.acc.mbx.wrn-web-page-request@mail.mil). If you have questions about the content of any specific item posted on the ProcNet, please call the contract specialist or point of contact listed for the item. For technical assistance in doing business with the Government, and doing business electronically, please visit the Procurement Technical Assistance Center website at <http://www.dla.mil/SmallBusiness/Pages/ProcurementTechnicalAssistanceCenters.aspx> to find a location near you.

End of Provision

A-2 52.204-4850 ACCEPTANCE APPENDIX SEP/2008

(a) Contract Number W56HZV-13-C-0349 is awarded to SCIENCE APPLICATIONS INTERNATIONAL CORPORATION .

(b) The contractor, in its proposal, provided data for various solicitation clauses, and that data has been added in this contract.

(c) Any attachments not included within this document will be provided by Army Contracting Command - Warren directly to the administrative contracting officer (ACO) via e-mail, as required. Technical data packages that are only available on CD-ROM will be mailed by Army Contracting Command - Warren to the ACO. Within one week of this award, any office not able to obtain attachments from the Army Contracting Command - Warren website (<https://contracting.tacom.army.mil/>) and still requiring a copy, can send an email request to the buyer listed on the front page of this contract.

(d) The following documents and changes are incorporated into this contract:

(1) The threshold requirements stated in the following Section C paragraphs have been increased to the performance parameters proposed in Volume 1 of the contractor's proposal number F05270.A.2013.002.000 dated 21 June 2013, submitted in response to solicitation W56HZV-13-R-0306. Both Section C of the contract and Attachment 0005 have been updated with the changes and are annotated by underline.

Paragraph C.2.4.1  
Paragraph C.2.5.1  
Paragraph C.2.5.2  
Paragraph C.2.5.4

(2) The contractors subcontracting plan dated 14 June 2013 (with amended pages 4 and 5 submitted 31 July 2013) is incorporated into the contract by reference as Attachment 0004 in Section J. This Attachment 0004 titled "Small Business Subcontracting Plan" supercedes the previous Attachment 0004 titled "Relevance Matrix for Experience" in its entirety as it was applicable to only the solicitation phase of the procurement.

(3) The contractor's Identification and Assertion of Use, Release, or Disclosure Restrictions document dated 21 June 2013 provided as attachment 1 of Volume 4 of the contractor's proposal is incorporated into the contract as Attachment 0006 in Section J.

(e) The following Amendment(s) to the solicitation are incorporated into this contract:

Amendment 0001 dated 14 June 2013

**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 4 of 59****PIIN/SIIN** W56HZV-13-C-0349**MOD/AMD****Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

[End of Clause]

A-3

52.201-4000

ARMY CONTRACTING COMMAND-WARREN (DTA) OMBUDSPERSON

APR/2011

Information regarding the Ombudsperson for this contract is located at the following website:  
<http://contracting.tacom.army.mil/acqinfo/ombudsperson.htm>

[End of Provision]

CONTINUATION SHEET

Reference No. of Document Being Continued  
 PIIN/SIIN W56HZV-13-C-0349 MOD/AMD

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT																																																																														
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS																																																																																		
0001	BI-MONTHLY PROGRESS REPORTS																																																																																		
0001AA	<p><u>BI-MONTHLY PROGRESS REPORTS</u></p> <p>GENERIC NAME DESCRIPTION: BI-MONTHLY PROGRESS REPORTS                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MC112R3 PRON AMD: 02 ACRN: AA</p> <p>The unit price for a single Bi-Monthly Progress report is shown in the "Unit Price" field. The total amount for the 12 each Bi-Monthly Progress Reports is shown in the "Amount" field.</p> <p>Bi-Monthly Progress Reports shall be delivered for the 24 month duration of the contract beginning 60 days after contract award.</p> <p>Inspection and Acceptance of each Bi-Monthly Progress Report will be In Accordance With (IAW) the requirements detailed in Section E.</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u></p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DOC</td> <td colspan="2">SUPPL</td> <td></td> <td></td> <td></td> </tr> <tr> <td>REL CD</td> <td>MILSTRIP</td> <td>ADDR</td> <td>SIG CD</td> <td>MARK FOR</td> <td>TP CD</td> </tr> <tr> <td>001</td> <td></td> <td>000000</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td><u>DEL REL CD</u></td> <td><u>QUANTITY</u></td> <td></td> <td><u>DEL DATE</u></td> <td></td> <td></td> </tr> <tr> <td>001</td> <td>1</td> <td></td> <td>21-OCT-2013</td> <td></td> <td></td> </tr> <tr> <td>002</td> <td>1</td> <td></td> <td>20-DEC-2013</td> <td></td> <td></td> </tr> <tr> <td>003</td> <td>1</td> <td></td> <td>18-FEB-2014</td> <td></td> <td></td> </tr> <tr> <td>004</td> <td>1</td> <td></td> <td>19-APR-2014</td> <td></td> <td></td> </tr> <tr> <td>005</td> <td>1</td> <td></td> <td>18-JUN-2014</td> <td></td> <td></td> </tr> <tr> <td>006</td> <td>1</td> <td></td> <td>17-AUG-2014</td> <td></td> <td></td> </tr> <tr> <td>007</td> <td>1</td> <td></td> <td>16-OCT-2014</td> <td></td> <td></td> </tr> <tr> <td>008</td> <td>1</td> <td></td> <td>15-DEC-2014</td> <td></td> <td></td> </tr> <tr> <td>009</td> <td>1</td> <td></td> <td>13-FEB-2015</td> <td></td> <td></td> </tr> </table>	DOC	SUPPL					REL CD	MILSTRIP	ADDR	SIG CD	MARK FOR	TP CD	001		000000			3	<u>DEL REL CD</u>	<u>QUANTITY</u>		<u>DEL DATE</u>			001	1		21-OCT-2013			002	1		20-DEC-2013			003	1		18-FEB-2014			004	1		19-APR-2014			005	1		18-JUN-2014			006	1		17-AUG-2014			007	1		16-OCT-2014			008	1		15-DEC-2014			009	1		13-FEB-2015			12	EA	\$ 9,360.80000	\$ 112,329.60
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CONTINUATION SHEET

Reference No. of Document Being Continued  
 PIIN/SIIN W56HZV-13-C-0349 MOD/AMD

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT								
0004	TEST PLAN												
0004AA	<p><u>TEST PLAN DELIVERABLE</u></p> <p>GENERIC NAME DESCRIPTION: TEST PLAN                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MCL12R3 PRON AMD: 02 ACRN: AA</p> <p>The price for the Test Plan is shown in the "Amount" field.</p> <p>The contractor shall deliver the Draft and Final Test Plan IAW Sections C.3.1, C.5.12, and CDRL A008.</p> <p>The Draft and Final Test Plan shall be delivered to the E-Mail address as stated in CDRL A008.</p> <p>The Final Test Plan shall be delivered no later than 4 months (120 days) after contract award.</p> <p>Inspection and Acceptance of the Test Plan will be IAW with the requirements detailed in Section E.</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td></td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>20-DEC-2013</td> </tr> </table> <p style="text-align: right;">\$ 339,090.28</p>	DLVR SCH		PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	20-DEC-2013	1	LO	\$ 339,090.28
DLVR SCH		PERF COMPL											
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>											
001	1	20-DEC-2013											
0005	FINAL DESIGN REVIEW												
0005AA	<p><u>FINAL DESIGN REVIEW &amp; DELIVERABLES</u></p> <p>GENERIC NAME DESCRIPTION: FINAL DESIGN REVIEW                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MCL12R3 PRON AMD: 02 ACRN: AA</p> <p>The Contractor shall provide all of the Supplies and</p>	1	LO	\$ 368,497.14									

CONTINUATION SHEET

Reference No. of Document Being Continued  
 PIIN/SIIN W56HZV-13-C-0349 MOD/AMD

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT									
	<p>Services to accomplish the Final Design Review (FDR) IAW Section C.4.4 of the Statement of Work, and CDRLs A003, A004, and A006.</p> <p>The price for the FDR and associated deliverables is shown in the "Amount" field.</p> <p>The FDR deliverables include: (1) the Final functional diagrams, schematics, and PRO-E compatible models of the exterior envelope; (2) Presentation Materials; and (3) Minutes.</p> <p>The FDR shall be conducted no later than 7 months (210 days) after contract award.</p> <p>Inspection and Acceptance to determine successful completion of the FDR will be IAW the requirements detailed in Section E.</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td></td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>20-MAR-2014</td> </tr> </table> <p style="text-align: right;">\$ 368,497.14</p>	DLVR SCH		PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	20-MAR-2014				
DLVR SCH		PERF COMPL												
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	1	20-MAR-2014												
0006	ICD, GUI SFTWR & USER MANUAL													
0006AA	<p><u>PERFORMANCE SPECIFICATION &amp; INTERFACE CONTROL DOCUMENT</u></p> <p>GENERIC NAME DESCRIPTION: ICD, GUI SFTWR &amp; USER MANUAL                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MCL12R3 PRON AMD: 02 ACRN: AA</p> <p>The price for the Performance Specification and Interface Control Document (ICD) is shown in the "Amount" field.</p> <p>The contractor shall deliver the Draft and Final Performance Specification and ICD IAW Sections C.2.3.5, C.5.3 and A005.</p> <p>The Performance Specification and ICD shall be delivered to the E-Mail address as stated in CDRL A005.</p>	1	LO		\$ 57,149.00									





CONTINUATION SHEET

Reference No. of Document Being Continued  
 PIIN/SIIN W56HZV-13-C-0349 MOD/AMD

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT										
0007AA	<p><u>TEST READINESS REVIEW &amp; DELIVERABLES</u></p> <p>GENERIC NAME DESCRIPTION: TEST READINESS REVIEW                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MCL12R3 PRON AMD: 02 ACRN: AA</p> <p>The Contractor shall provide all of the Supplies and Services to accomplish the Test Readiness Review (TRR) IAW Section C.4.5 of the Statement of Work.</p> <p>dThe price for the TRR and associated deliverables is shown in the "Amount" field.</p> <p>The TRR deliverables priced under this CLIN shall include: (1) the Preliminary Test Data Report (CDRL A009); (2) Presentation Materials (CDRL A003); and (3) Minutes (A004).</p> <p>The TRR price DOES NOT include the Price for the Performance Spec/ICD, GUI Software User Manual, or Training Plan as these deliverables are priced under separate CLINs.</p> <p>The TRR shall be conducted no later than 18 months (540 days) after contract award.</p> <p>Inspection and Acceptance to determine successful completion of the TRR will be IAW the requirements detailed in Section E.</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> </tr> <tr> <td>001</td> <td>1</td> </tr> <tr> <td></td> <td><u>DATE</u></td> </tr> <tr> <td></td> <td>13-FEB-2015</td> </tr> </table> <p style="text-align: right;">\$ 432,450.50</p>	DLVR SCH	PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	001	1		<u>DATE</u>		13-FEB-2015	1	LO		\$ 432,450.50
DLVR SCH	PERF COMPL														
<u>REL CD</u>	<u>QUANTITY</u>														
001	1														
	<u>DATE</u>														
	13-FEB-2015														
0008	<p><u>INTEGRATION AND TRAINING</u></p> <p>The contractor shall provide all of the Supplies and Services (except for the Government owned ISG currently in the TARDEC Lab) to accomplish the Integration and the Training at TARDEC IAW Section C.3.4 of the Statement of Work.</p>														

CONTINUATION SHEET

Reference No. of Document Being Continued  
 PIIN/SIIN W56HZV-13-C-0349 MOD/AMD

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT						
0008AA	<p>(End of narrative B001)</p> <p><u>OPTIMIZATION &amp; USE TRAINING PLAN</u></p> <p>GENERIC NAME DESCRIPTION: INTEGRATION AND TRAINING                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MCL12R3 PRON AMD: 02 ACRN: AA</p> <p>The price for the Optimization &amp; Use Training Plan is shown in the "Amount" field.</p> <p>The contractor shall deliver the Draft and Final Optimization &amp; Use Training Plan IAW Sections C.3.4, C.5.14, and CDRL A011.</p> <p>The Optimization &amp; Use Training Plan shall be delivered to the E-Mail address as stated in CDRL A011.</p> <p>The Final Optimization &amp; Use Training Plan shall be delivered no later than 18 months (540 days) after contract award.</p> <p>Inspection and Acceptance of the Optimization &amp; Use Training Plan will be IAW the requirements detailed in Section E.</p> <p>(End of narrative B002)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="1" data-bbox="261 1367 769 1444"> <thead> <tr> <th>DLVR SCH</th> <th>PERF COMPL</th> </tr> <tr> <th><u>REL CD</u></th> <th><u>DATE</u></th> </tr> </thead> <tbody> <tr> <td>001</td> <td>13-FEB-2015</td> </tr> </tbody> </table> <p style="text-align: right;">\$ 11,381.00</p>	DLVR SCH	PERF COMPL	<u>REL CD</u>	<u>DATE</u>	001	13-FEB-2015	1	LO		\$ 11,381.00
DLVR SCH	PERF COMPL										
<u>REL CD</u>	<u>DATE</u>										
001	13-FEB-2015										
0008AB	<p><u>INTEGRATION &amp; TRAINING AT TARDEC</u></p> <p>GENERIC NAME DESCRIPTION: SAIC - SiC ISG Contr                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MCL12R3 PRON AMD: 02 ACRN: AA</p> <p>The contractor shall supply all of the supplies (except for the Government owned ISG currently in the TARDEC Lab) and services to accomplish the integration of the generator controller unit in the TARDEC lab and provide the optimization and use</p>	1	LO		\$ 44,030.00						

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT												
	<p>training at TARDEC IAW Section C.3 and CDRL A011.</p> <p>The price for the integration of the generator controller unit and the optimization and use training to be conducted at TARDEC is shown in the "Amount" field.</p> <p>The integration and training shall be completed no later than 18.5 months (555 days) after contract award.</p> <p>Inspection and Acceptance to determine successful completion of the integration and training will be IAW the requirements detailed in Section E.</p> <p style="text-align: center;">(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination      ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">DLVR SCH</td> <td style="width: 35%;"></td> <td style="width: 15%;">PERF COMPL</td> <td style="width: 35%;"></td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> <td></td> </tr> <tr> <td>001</td> <td style="text-align: center;">1</td> <td>28-FEB-2015</td> <td></td> </tr> </table> <p style="text-align: right; margin-right: 50px;">\$            44,030.00</p>	DLVR SCH		PERF COMPL		<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>		001	1	28-FEB-2015					
DLVR SCH		PERF COMPL															
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001	1	28-FEB-2015															
0009	GENERATOR CONTROLLERS																
0009AA	<p><u>SIC GENERATOR CONTROLLER UNITS</u></p> <p>GENERIC NAME DESCRIPTION: GENERATOR CONTROLLERS                      CLIN CONTRACT TYPE:                          Firm Fixed Price                      PRON: R32MCL12R3      PRON AMD: 02      ACRN: AA</p> <p>The unit price for a single SiC generator controller unit is shown in the "Unit Price" field. The total amount for the 2 ea. SiC Generator Controller Units is shown in the "Amount" field.</p> <p>The SiC Generator Controller units shall be delivered IAW Sections C.5.2, C.5.9.</p> <p>Inspection and Acceptance of the SiC Generator Contoller units will be IAW the requirements detailed in Section E.</p> <p>The 2 functioning SiC Generator Controller units shall be delivered for acceptance testing no later</p>	2	EA	\$ 316,753.29000	\$ 633,506.58												

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	<p>than 18.5 months (555 days) after contract award.</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u></p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u>                      DOC SUPPL                      REL CD MILSTRIP ADDR SIG CD MARK FOR TP CD                      001 000000 3                      DEL REL CD QUANTITY DEL DATE                      001 2 28-FEB-2015</p> <p>FOB POINT: Destination</p> <p>SHIP TO:                      (Y00000) SEE BELOW FOR SHIPPING INSTRUCTIONS</p> <p>The SiC Generator Controller units shall be delivered to the physical address stated in Section F.1.1.</p> <p>(End of narrative F001)</p>				
0010	FINAL REPORT AND AS-BUILTS				
0010AA	<p><u>FINAL REPORT</u></p> <p>GENERIC NAME DESCRIPTION: FINAL REPORT AND AS-BUILTS                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R32MC112R3 PRON AMD: 02 ACRN: AA</p> <p>The price for the Final Report is shown in the "Amount" field.</p> <p>The contractor shall deliver a draft and the Final Report IAW Section C.5.8 and CDRL A002.</p> <p>The draft and the Final Report shall be delivered to the E-Mail address as stated in CDRL A002.</p> <p>Inspection and Acceptance of the Final Report will be IAW the requirements detailed in Section.</p> <p>The Final Report shall be delivered no later than 24 months (720 days) after contract award.</p>	1	LO		\$ 47,643.00



CONTINUATION SHEET

Reference No. of Document Being Continued  
 PIIN/SIIN W56HZV-13-C-0349 MOD/AMD

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT									
	<table border="0"> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>12-AUG-2015</td> </tr> <tr> <td></td> <td>\$ 23,174.00</td> <td></td> </tr> </table>	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	12-AUG-2015		\$ 23,174.00					
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	1	12-AUG-2015												
	\$ 23,174.00													
0011	<p><u>CONTRACT DATA REQUIREMENT LIST</u></p> <p>GENERIC NAME DESCRIPTION: DD FORM 1423 - CDRLS</p> <p>Technical Data as set forth in Contract Data Requirements List (CDRL) DD Form 1423, hereinafter referred to as Exhibit A.</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u>                      DLVR SCH PERF COMPL  <table border="0"> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>AS REQUIRED</td> </tr> </table> </p>	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	AS REQUIRED	1	LO		\$ ** NSP **			
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	1	AS REQUIRED												
0012	<p><u>CONTRACTOR MANPOWER REPORTING</u></p> <p>The contractor shall provide the information required per contract clause 52.237-4000, entitled "Contractor Manpower Reporting."</p> <p>Unit Identification Code (UIC): W4GHAA</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u>                      DLVR SCH PERF COMPL  <table border="0"> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>AS REQUIRED</td> </tr> </table> </p>	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	AS REQUIRED	1	LO		\$ ** NSP **			
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	1	AS REQUIRED												
0013	<p><u>DD FORM 882 REPORT OF INVENTIONS</u></p>	1	LO		\$ ** NSP **									

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT									
	<p>GENERIC NAME DESCRIPTION: REPORT OF INVENTIONS</p> <p>The contractor shall submit a Report of Inventions and subcontract, DD Form 882, in accordance with Section I DFARS Clause 252.227-7038. A copy of the form can be obtained at <a href="http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd0882.pdf">http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd0882.pdf</a></p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination      ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td></td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>AS REQUIRED</td> </tr> </table>	DLVR SCH		PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	AS REQUIRED				
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**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 19 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

## SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
C-1	52.204-4003 (TACOM)	START OF WORK MEETING	MAY/2000

The contractor shall host a start of work meeting at its facility, unless some other location is designated in the contract, within SEVEN (7) days after contract award. The contractor shall at a minimum invite the Contracting Officer's Representative (COR) identified in Section G or in an appointment letter, the Contract Specialist identified on the face page of this document, and the Administrative Contracting Officer (ACO). The COR, Contract Specialist, and ACO shall be given at least THREE (3) days advance notice of the time, date, and location of the start of work meeting. The preferred method of notification is by email.

[End of Clause]

C-2	52.237-4000 (TACOM)	CONTRACTOR MANPOWER REPORTING (CMR)	FEB/2013
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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 report ALL contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract via secure data collection site. The contractor is required to completely fill in all required data fields in the format using the following web address: <https://cmra.army.mil> . The required information includes the following:

- (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) Direct labor hours (including sub-contractors);
- (6) Direct labor dollars paid this reporting period (including sub-contractors);
- (7) Total payments (including sub-contractors);
- (8) Predominant Federal Service Code (FSC) reflecting services provided by contractor (and separate predominant FSC for each sub-contractor if different);
- (9) Data collection cost;
- (10) 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);
- (11) Locations where contractor and sub-contractors 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);
- (12) Presence of deployment or contingency contract language; and
- (13) Number of contractor and sub-contractor employees deployed in theater this reporting period (by country).

Reporting inputs will be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year, beginning with 2013. Contractors may direct questions to the help desk at : <https://cmra.army.mil>.

End of Clause]

Silicon Carbide Generator Controllers

## C.1 OBJECTIVES:

C.1.1 The objective of this statement of work is for the contractor to design, develop and deliver two ruggedized Silicon Carbide (SiC) Integrated Starter/ Generator (ISG) controllers (hereinafter referred to as generator controller) that enable high temperature

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

operation of high voltage integrated starter/generators for vehicle applications.

C.1.2 The contractor, acting as an independent contractor and not an agent of the government, shall provide the necessary personnel, facilities, materials and services to complete the effort described herein other than those facilities and services offered for rent free use by the Government under Section H of this contract.

C.1.3 Requirements listed are for continuous operation unless otherwise specified. The generator controller(s) shall be capable of meeting all requirements as stated within this statement of work continuously without reducing the capability of one requirement in order to meet another requirement.

C.1.4 In the event of conflict between the text of this specification and the references cited herein, the text of this specification takes precedence.

C.1.5 Unless otherwise specified, all requirements must be met without the assistance of external devices such as capacitors, inductors, or other electronic devices.

C.2 SCOPE OF WORK:

C.2.1 Specifications: Unless specifically attached hereto, all MIL-STDs referenced herein may be downloaded from <https://assist.daps.dla.mil/quicksearch/>. The generator controller(s) shall meet the following specifications:

C.2.1.1 The generator controller shall output 600 volts direct current (VDC) in accordance with (IAW) MIL-PRF-GCS600A Characteristics of 600 Volt DC Electrical Systems for Military Ground Vehicles (Attachment 002). The generator controller shall be capable of handling a step load of 45kW with a cable length between the controller and the generator of five (5) meters.

C.2.1.2 The generator controller shall meet its operational performance requirements described in this statement of work during and after being subjected to the following emission and susceptibility requirements of MIL-STD-461F:

- a. Conducted Emissions, Power Leads, 10 kHz to 10 MHz (CE102),
- b. Conducted Susceptibility, Power Leads, 30 Hz to 150 kHz (CS101),
- c. Conducted Susceptibility, Bulk Cable Injection, 10 kHz to 200 MHz (CS114),
- d. Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation (CS115),
- e. Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz (CS116),
- f. Radiated Emissions, Electric Field, 10 kHz to 18 GHz (RE102),
- g. Radiated Susceptibility, Electric Field, 2 MHz to 40 GHz (RS103).

C.2.1.3 The generator controller shall meet its operational performance requirements described in this statement of work immediately after being subjected to the Radiated Susceptibility, Transient Electromagnetic Field (RS105) requirement of MIL-STD-461F.

C.2.1.4 The generator controller shall meet its operational performance requirements described in this statement of work when exposed to the radio frequency electromagnetic environment (RF EME) described in paragraph 5.3 of MIL-STD-464C, Table 4.

C.2.1.5 The generator controller shall meet MIL-STD-810G environmental requirements necessary for integration onto combat and tactical vehicles.

C.2.2 Performance Requirements: The generator controller shall meet the following performance requirements:

C.2.2.1 Electric Machine Compatibility

C.2.2.1.1 The generator controller shall be compatible with a 3 phase permanent magnet (PM) machine with and without a position feedback device in both motoring and generating modes.

C.2.2.1.2 The generator controller shall have inputs and function with all of the following position feedback devices: Resolver, Encoder, Hall Effect sensor.

C.2.2.2 Power and Torque

C.2.2.2.1 The generator controller shall provide 175 kilowatts (kW) of continuous power output on the 600 volts direct current (VDC)

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-13-C-0349 <b>MOD/AMD</b>	<b>Page 21 of 59</b>
<b>Name of Offeror or Contractor:</b> SCIENCE APPLICATIONS INTERNATIONAL CORPORATION		

side.

C.2.2.2.2 The generator controller shall operate an electric machine in torque mode and speed mode to allow for vehicle engine starting and burst acceleration.

C.2.2.2.3 The generator controller shall motor the ISG to perform the engine cranking function pursuant to the following:

- a. Minimum torque capability shall be 700 Newton-meter (N-m) steady-state.
- b. Minimum peak (five (5) second transient) torque capability shall be at least 1500 N-m, 600 Amps Root-Mean-Square (RMS) output, with an objective of 1200 Amps RMS output.
- c. Minimum sustained cranking speed shall be 300 revolutions per minute (RPM), with a capability of at least 300 Amps RMS output, with an objective of 600 Amps RMS output.
- d. Minimum sustained cranking time (single event) shall be 30 seconds.
- e. Coolant flow shall be zero during cranking event.
- f. Bulk coolant maximum temperature before cranking event shall be 105 degrees Celsius (C).

C.2.2.2.4 The generator controller shall have an output direct current (DC) link capacitance no less than 100 micro-Farads (uF) for DC bus stability. The generator controller shall minimize the effects of source harmonics from the effects of dead time, unbalance of alternating current (AC) input, and torque ripple. The generator controller shall absorb up to three percent harmonics Root Mean Square (RMS) values relative to the DC magnitude in current from the other DC bus loads.

C.2.2.2.5 The generator controller shall provide 175 kW of continuous power output to the motor.

C.2.2.3 Environmental

C.2.2.3.1 The generator controller shall not suffer performance degradation or damage following exposure to water jet spraying when the jet spray is applied perpendicular to the surface being cleaned at a distance of not less than 1 foot (ft) [0.3 meter (m)] from the surface and a cleaning rate of 1 ft squared/minutes [930 centimeters (cm squared)/minutes]. The water jet shall be derived from a nozzle having a maximum orifice diameter of 0.25 inch (64 cm) and a maximum nozzle pressure of 25 pounds per square inch (psi) (172 kilopascal(kPa)).

C.2.2.3.2 The generator controller shall operate without performance degradation during basic shock conditions. Basic shock conditions consist of imposing shock half sine impulses of 40 g (1 g=acceleration due to earths gravity) with an effective duration of 11 millisecond (ms) at the interface between the subsystem and the location of the vehicle where it is mounted. This includes mounting brackets, weld joints, shock isolators, or any other mounting device as applicable. Verification shall be done by exposing the device to three shock impulses in each direction of three mutually perpendicular axes (total of 18 shock pulses) and verifying there is no damage.

C.2.2.3.3 The generator controller shall withstand minimum static equivalent loads of 10g vertical, 6g fore and aft, and 6g in the lateral direction for 48 hours.

C.2.2.3.4 The generator controller shall operate with no physical damage that affects the performance or functionality at the conditions described in this statement of work.

C.2.2.3.5 The generator controller shall operate without performance degradation during and after exposure to relative humidity up to 100%.

C.2.2.3.6 The generator controller shall be hardened with nuclear event detection circuitry.

C.2.2.3.7 The generator controller shall meet its full performance requirements without performance or physical degradation while operating to a minimum ambient air temperature of -60 degrees F (-51 degrees C).

C.2.2.3.8 The generator controller shall comply with the performance requirements defined in ATPD-2404 section 5 (Attachment 0003).

C.2.2.4 Safety

C.2.2.4.1 The generator controller shall have protection from short circuit conditions at the high voltage outputs as follows: Each high voltage output power connector on the generator controller shall accommodate a High Voltage Interlock Loop interface that detects if a high voltage connector to the load is disconnected (open circuit condition). The generator controller shall output 600 VDC only if the high voltage interlock is closed on the corresponding output. This high voltage interlock shall have the capability to be

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

overridden via controller area network (CAN) through a safety override type command.

C.2.2.4.2 The generator controller shall sense a connection between its power circuitry and the chassis and notify the vehicle (broadcast) via Controller Area Network (CAN) if a Ground Fault is detected at the controller 600 VDC output. The ground-fault interrupter (GFI) hardware shall sense if there is a Ground Fault current of 3 milliamp (mA) from +300 VDC to chassis and from -300 VDC to chassis.

C.2.2.4.3 The generator controller high voltage (HV) power (600 VDC) and return shall be electrically isolated from the generator controller primary power (28 VDC) returns by a resistance of 100 Megaohms or greater.

C.2.2.4.4 The generator controller HV power (600 VDC) and return shall be electrically isolated from the equipment chassis by a resistance of 100 Megaohms or greater when not connected to the Ground Fault Detector circuitry.

C.2.2.4.5 The generator controller shall be designed and manufactured to comply with High Voltage Corona (HVC) pursuant to the requirements defined in MIL-HDBK-454, Guideline 45 for altitudes up to 15,000 ft (4,572 m).

C.2.2.4.6 The generator controller shall have a green light emitting diode (LED) indicator by the HV connector signifying if 600VDC is being outputted through the connection. The LED shall turn red if the safety interlock is open. The LED shall turn blue if the HV safety interlock has been overridden and the connection is outputting 600VDC.

C.2.2.4.7 The generator controller shall incorporate arc flash mitigation to limit incident energy as follows pursuant to the IEEE-1584 Arc Flash Standard:

- a. Bolted Fault current shall not exceed 15 kiloamps (kA)
- b. Clearing Time shall be less than or equal to .01 seconds
- c. Working Distance less than or equal to 18 inches
- d. System Voltage (Vs) equal to 623 VDC
- e. Arc Boundary distance shall be less than 10.4 cm

### C.2.3 Control Interface

C.2.3.1 The generator controller shall be controllable via J1939 CAN protocol. The generator controller shall provide no network termination.

C.2.3.2 The generator controller shall make available on the CAN all monitored data; this includes phase voltages, DC bus voltage, currents, temperatures, fault status, feedback [bus voltage, current quadrature (Iq) component, and current direct (Id) component {higher update rate}], speed, available temperatures] and all other data that the controller monitors.

C.2.3.3 The generator controller shall make available on the CAN the following functions: Enable/disable, Torque command, speed command, voltage command, mode selection (torque, speed, voltage), and individual fault reset.

C.2.3.4 The generator controller shall be configurable via reprogramming through the CAN interface.

C.2.3.5 The generator controller CAN messages shall use the messaging format in the CAN message interface control document (ICD) template (Attachment 0001).

C.2.3.6 The generator controller shall monitor and report status of the high voltage interlocks via CAN.

C.2.3.7 The generator controller shall record faults and report them over the CAN for system diagnosis.

C.2.3.8 The generator controller software shall alert via CAN when regulation pursuant to MIL-PRF-GCS600A (Attachment 0002) is not possible due to ISG and generator controller limitations (Attachment 0002).

C.2.3.9 The following generator controller options shall be programmable via CAN and through an additionally provided serial port:

- a. Induction PM machine
- b. Surface-mount PM machine
- c. Number of pole pairs

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

- d. Resolver, encoder, hall feedback
- e. Resolver configuration (excitation frequency, number of resolver poles, alignment)
- f. Encoder configuration (number of lines, alignment (index))
- g. Hall configuration (alignment)
- h. Tuning parameters (Proportional Integral Derivative gains for current/speed/voltage loops)
- i. Calibration (offset and gain on current/voltage sensors)
- j. Limits (current, voltage, slew rates, temperature, speed)
- k. Switching frequency
- l. Dead time
- m. Temperature foldback and shutdown current settings
- n. Digital to analog (D/A) output settings real-time update rate (e.g. Id, Iq, Volts Direct Current (Vdc), Phase Currents (Ia, Ib, Ic) Voltage quadrature (Vq) component, Voltage direct (Vd) component, position, speed)
- o. Field weakening parameters (e.g. Iq and Id profiles with respect to torque and speed)
- p. Save serial configuration options to non-volatile memory
- q. Calibration for operation without a position sensor.
- r. Calibration for operation with a position sensor.
- s. Save and restore all parameters to disk (on the programming computer)

C.2.3.10 The generator controller shall be designed to be programmable by the end user with minimal training to allow for integration with PM machines of varying designs as described in paragraph C.2.2.1.1.

C.2.3.11 The generator controller shall utilize a 28VDC input for low voltage control power. The 28 VDC bus shall be compatible with MIL-STD-1275E.

C.2.3.12 The generator controller application software shall provide access to:

- a. Input / Output (I/O) signals
- b. Status
- c. Drive faults
- d. Torque (current)
- e. Feedback signals (rotor position and rotor speed, current, bus voltage, and power delivered to the HV DC Link (HV Bus).)

C.2.3.13 The generator controller shall cease bus regulation and cease energizing the bus upon external command via messaging from the CAN bus.

C.2.3.14 The generator controller firmware and embedded operating system software shall be upgradable via the serial port described in section C.2.3.9.

#### C.2.4 Cooling

C.2.4.1 The generator controller shall operate at full power with 105 degrees Celsius input coolant and 150 degrees Celsius ambient temperature. The flow rate shall not exceed 12 liters/minute, at 9 psig (Pounds Per Square Inch Gauge) inlet pressure. The maximum outlet steady state temperature shall not exceed 120 degrees Celsius.

C.2.4.2 The generator controller components shall be designed to withstand a non-operational peak soak back temperature of 125 degrees Celsius, with an objective of 150 degrees Celsius.

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

C.2.4.3 The generator controller shall be compatible with an Ethylene Glycol Water (EGW) 50/50 mixture, and be capable of operating at a pressure of 100 PSIG.

C.2.4.4 The generator controller shall monitor critical cooling performance data, including at a minimum, inlet and outlet coolant temperatures, and critical heat rejection component temperatures (e.g. power conversion devices). Examples of Critical components include the components that will be first to suffer failure due to excessive heat rejection while under load conditions.

#### C.2.5 Space Claim

C.2.5.1 The generator controller shall have a (continuous) power density (power/volume) of at least 19.6 kW/liter with an objective of 35 kW/liter. The power used to compute the power density and specific power shall be the continuous electrical power of the generator controller. Continuous operation is defined as operation for 180 minutes at constant output power and stabilized conditions with coolant inlet temperatures of greater than or equal to 105 degrees Celsius inlet and a 150 degrees Celsius ambient temperature, while operating from 600 VDC Bus. The volume and weight used for the power density and specific power (power/weight) calculation is calculated with a rectangular box that includes the total generator controller enclosure and all components that are mechanically and permanently attached, including all generator controller hardware such as the power stage, gate drive/power supply, inductors, sensors, filters, and interfaces.

C.2.5.2 The generator controller shall have a (continuous) specific power (power/weight) of at least 10.5kW/kg and an objective of 25 kW/kg.

C.2.5.3 The generator controller shall use SiC modules for the primary switching components inside the controller.

C.2.5.4 The generator controller shall be designed to be mounted in any physical orientation and operate without degradation. The generator controller shall not exceed any of the following dimensions stated in millimeters (mm) (including connectors) 385mm (L) x 130 mm (H) x 280mm (D). The contractor shall deliver PRO-E compatible models of the exterior envelope of the generator controller IAW C.5.5.

C.2.5.5 The generator controller signal connectors shall be commercial off the shelf connectors, of an existing current military standard (e.g. MIL-DTL-38999L w/AMENDMENT 2, series III).

C.2.5.6 The generator controller shall have three (3) 600VDC output circuits with the following current ratings: (i) 300 amps, (ii) 75 amps, and (iii) 75 amps. The 600VDC circuits shall utilize solid state circuit breakers that are configured electrically as normally off (the device will not pass current without a gate signal). The circuits shall have a user adjustable current setting that allows for adjustments from 20% to 100% of its maximum current rating. The circuits shall have the ability to be disabled via a message from the CAN bus.

#### C.2.6 Graphical User Interface (GUI):

C.2.6.1 The contractor shall develop and deliver a GUI (C.5.6) for the generator controllers that functions with both CAN and serial communication interfaces, and that provides data acquisition capability for testing.

C.2.6.2 The GUI shall allow for the tuning of the ISG parameters in real-time, including hardware controlled and monitored current and voltage limits, control(s) system gain parameters, bus voltage control gains and limits, and any other parameters essential for HV Power production and HV Bus voltage regulation. The GUI shall have data logging and debugging functionality. The GUI shall allow user modification of CAN data frames, packing, bit rate, and all other configurable parameters without modifying source code.

C.2.6.3 The contractor shall develop and deliver a user manual for the GUI IAW CDRL A007 and C.5.7. The contractor shall also deliver the final version of firmware required for operation of the generator controller IAW CDRL A010 and C.5.2.

#### C.3 Testing, Integration and Training:

C.3.1 The contractor shall develop a test plan that when performed demonstrates that the generator controller meets the requirements described in this statement of work as identified in Attachment 0005. The contractor shall submit the test plan IAW C.5.12, CDRL A008 and Attachment 0005.

C.3.2 The contractor shall complete all preliminary testing required by Attachment 0005 and summarize the data in a test report IAW CDRL A009. The preliminary test data report shall be delivered IAW C.5.13. If the TARDEC labs are used for preliminary testing IAW Section H.1., any fixturing, test loads, and tooling required to run the tests at the TARDEC lab, beyond what is owned by the government in the TARDEC labs, shall be a deliverable under this contract IAW C.5.9.

C.3.3 After COR concurrence of a successful test readiness review as required by C.4.5, the contractor shall integrate one generator controller into the TARDEC Systems Integration Lab (SIL) for use in optimization and use training of TARDEC personnel.

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

C.3.4 The contractor shall provide one day of training for up to 15 TARDEC personnel at TARDEC on the use and optimization of the ISG operation no later than 18.5 months after contract award. The contractor shall develop a Training Plan IAW CDRL A011. The Training Plan shall be delivered IAW C.5.14. An existing government owned ISG will be utilized for the training. The contractor shall coordinate the specific dates for the integration of the generator controller unit and training with COR no less than ten (10) calendar days in advance.

#### C.4 Meetings

C.4.1 Start of Work Meeting: The contractor shall plan and conduct a one (1) day start of work meeting at a mutually agreed upon location, which shall be the contractors facility, or teleconference within seven (7) calendar days after contract award. The date and time of the start of work meeting shall be mutually agreed to between the COR and contractor. The contractor shall coordinate this meeting with the COR and at a minimum invite the COR, the Contract Specialist shown on page one of the contract and the Administrative Contracting Officer shown in Section G of the contract. The contractor shall prepare presentation materials IAW CDRL A003. The presentation materials shall be delivered to the COR no later than one (1) calendar day prior to the scheduled meeting. The contractor shall prepare minutes from the Start of Work meeting IAW CDRL A004. The minutes shall be delivered IAW C.5.11.

C.4.2. Preliminary Design Review (PDR): The contractor shall plan and conduct a PDR at a mutually agreed upon location, which shall be the contractors facility or teleconference no later than two (2) months after contract award. The date and time shall be mutually agreed to between the COR and contractor. The contractor shall prepare presentation materials IAW CDRL A003, and preliminary functional diagrams, schematics and PRO-E compatible models of the exterior envelope IAW CDRL A006. The presentation materials, preliminary functional diagrams, schematics, and PRO-E compatible models shall be delivered IAW C.5.4, C.5.5 and C.5.10. The contractor shall prepare minutes from the PDR IAW CDRL A004. The minutes shall be delivered IAW C.5.11.

C.4.3 Critical Design Review (CDR): The contractor shall plan and conduct a CDR at a mutually agreed upon location, which shall be the contractors facility or teleconference no later than four (4) months after contract award. The date and time shall be mutually agreed to between the COR and contractor. The contractor shall prepare presentation materials IAW CDRL A003, and the revised functional diagrams and schematics and PRO-E compatible models of the exterior envelope IAW CDRL A006. The presentation materials, revised functional diagrams, schematics, and PRO-E compatible models shall be delivered IAW C.5.4, C.5.5 and C.5.10. The contractor shall prepare minutes from the CDR IAW CDRL A004. The minutes shall be delivered IAW C.5.11.

C.4.4 Final Design Review (FDR): The contractor shall plan and conduct a FDR at a mutually agreed upon location, which shall be the contractors facility or teleconference no later than seven (7) months after contract award. The date and time shall be mutually agreed to between the COR and contractor. The contractor shall prepare presentation materials IAW CDRL A003 and the final functional diagrams and schematics and PRO-E compatible models of the exterior envelope IAWCDRL A006. The presentation materials, final functional diagrams, schematics, and PRO-E compatible models shall be delivered IAW C.5.4, C.5.5 and C.5.10. The contractor shall prepare minutes from the FDR IAW CDRL A004. The minutes shall be delivered IAW C.5.11.

C.4.5 Test Readiness Review (TRR): The contractor shall plan and conduct a TRR at a mutually agreed upon location, which shall be the contractors facility or teleconference. The contractor shall schedule and coordinate the TRR no later than eighteen (18) months after contract award. The date and time shall be mutually agreed to between the COR and contractor. The purpose of the review is to assess the contractors readiness to ship the generator controller Units for integration into the TARDEC SIL for optimization and use training, and for Government acceptance testing. The TRR shall review the Performance Specification and Interface Control Document (CDRL A005 and C.5.3), the GUI software user manual (CDRL A007 and C.5.7), the Preliminary Test Data Report (CDRL A009 and C.5.13), and the Training Plan (CDRL A011 and C.5.14). The contractor shall prepare presentation materials for the TRR IAW CDRL A003. Delivery of the presentation materials shall be IAW C.5.10. The contractor shall prepare minutes from the TRR IAW CDRL A004. The minutes shall be delivered IAW C.5.11.

#### C.5 Deliverables

C.5.1 Bi-Monthly Reports: The contractor shall submit bi-monthly (every two months) progress reports for the duration of this contract IAW CDRL A001. The first report shall be due 60 days after contract award. Subsequent reports are due every 60 days thereafter.

C.5.2 SiC Generator Controller Units: The Contractor shall deliver two (2) identical, functioning SiC generator controllers that meet the requirements specified above no later than 18.5 months after contract award. The two controllers shall be delivered to the physical address stated in F.1.1. The contractor shall also deliver the final version of firmware required for operation of the generator controller IAW CDRL A010 no later than 18.5 months after contract award to the physical address stated in F.1.1. of the contract.

C.5.3 Performance Specification and Interface Control Document: The Contractor shall develop and deliver a non-proprietary, public releasable Performance Specification and Interface Control Document (ICD) that will allow for competitive future procurement and integration into an electrical power system. The contractor shall deliver the Performance Specification and ICD to the COR IAW CDRL A005 within 18 months of contract award. The contractor shall provide a draft of the Performance Specification and ICD to the COR no later than 17 months after award. The COR will concur or comment within 15 calendar days of each design review. Any revisions required to obtain COR approval shall be made and resubmitted to the COR for approval within 15 calendar days of receipt of COR comments.

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

**C.5.4 Functional Diagrams and Schematics:** The Contractor shall deliver functional diagrams and schematics IAW CDRL A006 to describe the operation of the controller for the generator controller hardware and software developed and delivered under this contract. The contractor shall deliver Preliminary, Revised, Final, and As-Built functional diagrams and schematics IAW CDRL A006. The preliminaries shall be delivered no later than seven (7) calendar days prior to PDR (C.4.2). The revised shall be delivered no later than seven (7) calendar days prior to CDR (C.4.3). The finals shall be due no later than seven (7) calendar days prior to the FDR (C.4.4). The As-Built Finals shall be delivered no later than 23 months after award. The contractor shall obtain COR approval of each design iteration prior to proceeding with the effort. The COR will concur or comment within 15 calendar days of each design review. Any revisions required to obtain COR approval shall be made and resubmitted to the COR for approval within 15 calendar days of receipt of COR comments.

**C.5.5 PRO-E Compatible Models of Exterior Envelope:** The Contractor shall deliver the electronic version of the PRO-E compatible models of the exterior envelope, with connections and mounting points, for the generator controller IAW CDRL A006. The contractor shall deliver Preliminary, Revised, Final, and As-Built PRO-E compatible models of the exterior envelop IAW CDRL A006. The preliminaries shall be delivered no later than seven (7) calendar days prior to PDR (C.4.2). The revised shall be delivered no later than seven (7) calendar days prior to CDR (C.4.3). The finals shall be due no later than seven (7) calendar days prior to the FDR (C.4.4). The As-Built shall be delivered no later than 23 months after award. The contractor shall obtain COR approval of each design iteration prior to proceeding with the effort. The COR will concur or comment within 15 calendar days of each design review. Any revisions required to obtain COR approval shall be made and resubmitted to the COR for approval within 15 calendar days of receipt of COR comments.

**C.5.6 GUI Software:** The Contractor shall deliver the GUI software to the COR IAW CDRL A007 within 18.5 months of contract award.

**C.5.7 GUI Software User Manual:** The contractor shall deliver the user manual for the GUI software IAW CDRL A007 within 18 months of contract award. A draft of the GUI software user manual shall be delivered to the COR no later than 17 months after award. The COR will review and approve or comment on the user manual within 15 calendar days of receipt. The contractor shall revise and resubmit the Final GUI software manual within 15 calendar days of receipt of COR comments

**C.5.8 Final Report:** The contractor shall deliver a Final Report IAW CDRL A002 no later than 24 months after award. This report shall include all data collected during tests and the test results, source code developed under this effort, recommendations for future improvements, and lessons learned. A draft of the final report shall be delivered to the COR no later than 23 months after award. The COR will review and provide comments within 15 calendar days after receipt. The contractor shall incorporate COR comments and submit the Final Report within 15 calendar days after receipt of COR comments.

**C.5.9** The contractor shall deliver the generator controllers, any fixturing, test loads, and tooling required for performance of the generator controllers in the TARDEC labs, and the GUI to the physical address stated in F.1.1. of the contract.

**C.5.10 Presentation Materials:** The contractor shall deliver presentation materials IAW CDRL A003. All presentation materials shall include an agenda and program plan. Presentation materials shall be provided to the COR no later than seven (7) calendar days prior to the applicable meeting or review unless otherwise stated in the statement of work. The contractor shall obtain COR approval of the program plan and any subsequent update thereto prior to proceeding with the effort. The COR will concur or comment on the program plan within 15 calendar days after each meeting and review. Any revisions required to obtain COR approval shall be made and resubmitted to the COR for approval within 15 calendar days of receipt of COR comments.

**C.5.11 Meeting Minutes:** The contractor shall deliver conference minutes (meeting minutes) IAW CDRL A004. All meeting minutes shall be provided to the COR no later seven (7) calendar days after each meeting.

**C.5.12 Test Plan:** The contractor shall deliver a test plan IAW CDRL A008 to the COR no later than four (4) months after contract award. The contractor shall provide a draft of the test plan no later than three (3) months after contract award. The COR will comment or concur within 15 calendar days after receipt. The contractor shall submit any requested revisions to the test plan within 15 calendar days after receipt of COR comments.

**C.5.13 Preliminary Test Data Report:** The contractor shall deliver the preliminary test data report IAW CDRL A009. The preliminary test data report shall be delivered to the COR no later than seven (7) calendar days prior to the Test Readiness Review IAW C.4.5. The COR will concur or comment within 15 calendar days after receipt. Any revisions required to obtain COR approval shall be made and resubmitted to the COR for approval within 15 calendar days of receipt of COR comments.

**C.5.14 Training Plan:** The contractor shall deliver a training plan IAW CDRL A011 no later than 18 months after award. The contractor shall provide a draft of the training plan to the COR no later than 17 months after award. The COR will review and approve or comment on the training plan within 15 calendar days of receipt. The contractor shall revise and resubmit within 15 calendar days of receipt of COR comments. Any fixturing, test loads, tooling, cables, or connectors required to conduct the training at the TARDEC lab beyond what is owned by the government in the TARDEC labs, shall be a deliverable under this contract IAW C.5.9.

**C.6 Security:** The contractor shall adhere to the security requirements as stated in Section H.2 for any activity conducted on-site at the Detroit Arsenal as described in the statement of work above.

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**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 27 of 59****PIIN/SIIN** W56HZV-13-C-0349**MOD/AMD**

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**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

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\*\*\* END OF NARRATIVE C0001 \*\*\*

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 28 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

## SECTION D - PACKAGING AND MARKING

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
D-1	52.247-4016 (TACOM)	HEAT TREATMENT AND MARKING OF WOOD PACKAGING MATERIALS	AUG/2005

Boxes/pallets and any wood used as inner packaging made of non-manufactured wood shall be heat-treated. All non-manufactured wood used in packaging shall be heat treated to a core temperature of 56 degrees Celsius for a minimum of 30 minutes. The box/pallet manufacturer and the manufacturer of wood used as inner packaging shall be affiliated with an inspection agency accredited by the board of review of the American Lumber Standard Committee. The box/pallet manufacturer and the manufacturer of wood used as inner packaging shall ensure traceability to the original source of heat treatment.

Marking. Each box/pallet shall be marked to show the conformance to the International Plant Protection Convention Standard. The quality mark shall be placed on both ends of the outer packaging, between the end cleats or end battens; on two sides of the pallet. Foreign manufacturers shall have the heat treatment of non-manufactured wood products verified in accordance with their National Plant Protection Organization's compliance program. In addition, wood used as dunnage for blocking and bracing shall be ordered with ALSC certified marking for dunnage or the markings may be applied locally at two foot intervals.

[End of Clause]

## D.1 PACKAGING

D.1.1 The contractor shall package and pack all items deliverable under this contract in accordance with standard commercial practices to ensure arrival at destination without damage or loss.

## D.2 MARKING

D.2.1 Technical Data Marking: The contractor shall ensure that all technical data deliverable under this contract is identified by (1) CONTRACT NUMBER; (2) CONTRACTOR NAME AND ADDRESS; and where applicable (3) THE NAME AND ADDRESS OF THE SUBCONTRACTOR WHO GENERATED THE DATA.

D.2.2 Materials and Hardware Marking: The contractor shall mark or tag all materials and hardware required to be delivered under this contract with the following information:

1. TACOM CONTRACT NUMBER
2. CONTRACTOR'S NAME
3. CONTRACTOR' ADDRESS
4. A DESCRIPTION OF MATERIAL/HARDWARE

\*\*\* END OF NARRATIVE D0001 \*\*\*

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 29 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

## SECTION E - INSPECTION AND ACCEPTANCE

This document 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 these addresses:

<http://farsite.hill.af.mil/VFFARA.HTM> or <http://farsite.hill.af.mil/VFDFARA.HTM> or <http://farsite.hill.af.mil/VFAFARA.HTM>

If the clause requires additional or unique information, then that information is provided immediately after the clause title.

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
E-1	52.246-4	INSPECTION OF SERVICES--FIXED-PRICE	AUG/1996
E-2	52.246-7	INSPECTION OF RESEARCH AND DEVELOPMENT--FIXED PRICE	AUG/1996
E-3	52.246-16	RESPONSIBILITY FOR SUPPLIES	APR/1984
E-4	(52.246-4009) (TACOM)	INSPECTION AND ACCEPTANCE POINTS: DESTINATION	FEB/1995

Inspection and acceptance of supplies offered under this purchase order shall take place as specified here. Inspection: DESTINATION. Acceptance: DESTINATION.

[End of Clause]

## E.1 INSPECTION &amp; ACCEPTANCE POINT

E.1.1 Inspection and acceptance of all deliverables under this contract shall be made at DESTINATION by the Contracting Officer or his duly authorized representative. The determination that the deliverables are complete and conform to the requirements of the contract will be made by the Contracting Officer's Representative (COR), to assure the work and the results thereof are in accordance with the terms of the contract.

## E.2 INSPECTION &amp; ACCEPTANCE

E.2.1 Bi-Monthly Progress Reports Acceptance Criteria (CLIN 0001): The Bi-Monthly Progress Reports will be inspected by the COR for compliance with requirements of CDRL A001. Any revisions required by the COR to meet compliance with the CDRL requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the Bi-Monthly Report.

E.2.2 Preliminary Design Review Acceptance Criteria (CLIN 0002): The Preliminary Design Review will be considered successfully completed upon conclusion of the review, submission of the meeting minutes and COR acceptance of the Preliminary Diagram, Schematics, PRO-E models, and Presentation Materials.

E.2.2.1 The preliminary functional diagrams, schematics, and PRO-E Compatible Models will be inspected by the COR for compliance with requirements of CDRL A006 and the requirements of C.2.5.4, C.4.2, C.5.4, and C.5.5. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the diagrams, schematics, and PRO-E Compatible Models.

E.2.2.2 The Presentation materials will be inspected by the COR for compliance with the requirements of CDRL A003 and Section C.5.10. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the Presentation materials.

E.2.3 Critical Design Review Acceptance Criteria (CLIN 0003): The Critical Design Review will be considered successfully completed upon conclusion of the review, submission of the meeting minutes, and COR acceptance of the Revised Functional Diagrams, Schematics, and PRO-E models, and Presentation Materials.

E.2.3.1 The Revised functional diagrams, schematics, and PRO-E Compatible Models will be inspected by the COR for compliance with requirements of CDRL A006 and the requirements of C.2.5.4, C.4.3, C.5.4, and C.5.5. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the diagrams, schematics, and PRO-E Compatible Models.

E.2.3.2 The Presentation materials will be inspected by the COR for compliance with the requirements of CDRL A003 and Section C.5.10. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the Presentation materials.

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

E.2.4 Test Plan Acceptance Criteria (CLIN 0004)

E.2.4.1 The test plan will be inspected and accepted by the COR for compliance with CDRL A008 and the test method criteria set forth in Attachment 0005. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the test plan and prior to the execution the test plan.

E.2.5 Final Design Review (CLIN 0005): The Final Design Review will be considered successful upon conclusion of the review, submission of the meeting minutes, and COR acceptance of the final diagrams, schematics, PRO-E models, and Presentation Materials.

E.2.5.1 The final functional diagrams, schematics, and PRO-E Compatible Models will be inspected by the COR for compliance with requirements of CDRL A006 and the requirements of C.2.5.4, C.4.4, C.5.4, and C.5.5. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the diagrams, schematics, and PRO-E Compatible Models.

E.2.5.2 The Presentation materials will be inspected by the COR for compliance with the requirements of CDRL A003 and Section C.5.10. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the Presentation materials.

E.2.6 Performance Specification and Interface Control Document, Graphical User Interface (GUI) Software User Manual, and GUI Software Acceptance Criteria (CLIN 0006)

E.2.6.1 Performance Specification and Interface Control Document (Sub-CLIN 0006AA): The Performance Specification and Interface Control Document will be inspected by the COR for compliance with the requirements set forth in Section C.5.3 and CDRL A005. Any revisions required by the COR to meet compliance with the CDRL requirements and Section C.5.3 shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the Performance Specification and Interface Control Document.

E.2.6.2 GUI Software User Manual (Sub-CLIN 0006AB): The GUI software user manual will be inspected by the COR for compliance with the requirements set forth in Section C.2.6.3 and CDRL A007. Any revisions required by the COR to meet compliance with the CDRL requirements and Section C.2.6.3 shall be made by the contractor IAW C.5.7 at no additional cost to the Government prior to COR acceptance of the GUI user manual.

E.2.6.3 GUI Software (Sub-CLIN 0006AC): The GUI software will inspected by the COR for compliance with the requirements set forth in Section C.2.6 and CDRL A007. Any revisions required by the COR to meet compliance with the CDRL requirements and Section C.2.6 shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the GUI software.

E.2.7 Test Readiness Review (CLIN 0007): The Test Readiness Review will be considered successful upon conclusion of the review, submission of the meeting minutes, COR acceptance of the Preliminary Test data report and Presentation Materials, and COR concurrence that the Performance Specification and Interface Control Document, the GUI software user manual, and the Training Plan have been accepted by the government.

E.2.7.1 The preliminary test data report will be inspected by the COR for compliance with the approved test plan, the test method and criteria stated in Attachment 0005 for the preliminary testing, and CDRL A009. The preliminary test data report shall demonstrate successful completion of the all tests specified for preliminary testing in Attachment 0005. The contractor shall be responsible for correcting any deficiencies or failures of the silicon carbide generator controller units found during preliminary testing at no additional cost to the Government. Deficiencies and failures of the SiC Generator controller units shall be corrected and units retested to demonstrate compliance with the test criteria prior to COR acceptance of the test data report.

E.2.7.2 The Presentation materials will be inspected by the COR for compliance with the requirements of CDRL A003 and Section C.5.10. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the Presentation materials.

E.2.8 Integration and Optimization and Use Training at TARDEC Acceptance Criteria (CLIN 0008)

E.2.8.1 Training Plan (CLIN 0008AA): The training plan will be inspected by the COR for compliance with the requirements of CDRL A011. Any revisions required by the COR to meet compliance with the requirements of CDRL A011 shall be made by the contractor IAW C.5.14 at no additional cost to the Government prior to COR acceptance of the training plan and prior to the execution of training.

E.2.8.2 Integration and Optimization and Use Training at TARDEC (CLIN 0008AB): The integration of the generator controller unit and the optimization and use training of the TARDEC personnel will be considered successful upon completion of the training covering all training items as described in the COR approved Training Plan IAW CDRL A011. The COR will certify completion of the training via email to the contractor.

E.2.9 Generator Controller Units (CLIN 0009)

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

E.2.9.1 A deficiency is defined as a condition that lacks an essential quality or element of Section C.

E.2.9.2 A failure is defined as the condition of not achieving the desired end or requirement, i.e. an event or state, in which a system or a component does not perform as specified.

E.2.9.3 The Contractor shall deliver two (2) SiC Generator Controller Units in accordance with the schedule set forth in Section B and F of this contract for acceptance testing in accordance with the contractor provided, Government approved test plan. The shipping documentation shall contain this contract number and the Item identification (SiC Generator Controller Unit(s)). The two units shall be sent to the attention of the COR at the physical address and as stated in Section F.1.1. The characteristics that the units must meet and the testing requirements are specified in Section C and Attachment 0005 of the contract. The Government will perform testing on each unit in accordance with the test criteria stated in Attachment 0005 to determine that the unit meets the requirements of the statement of work prior to acceptance.

(a) Each unit will be separately tested for complete compliance as described in Attachment 0005. The units will be tested simultaneously with one unit starting with Attachment 0005 Section A5-1 (hereafter referred to as Section A5-1) testing while the other unit starts with Attachment 0005 Section A5-2 (hereafter referred to as Section A5-2) testing.

(b) SiC Generator Controller Unit One (hereafter referred to as Unit One) will first be subjected to Section A5-1 testing to determine compliance with the requirements in the statement of work. The Government will conditionally accept Unit One upon successful completion of the Section A5-1 testing. Successful completion is defined as the Unit having met all of the testing requirements without any deficiencies or failures. Upon conditional acceptance of Unit One, the contractor may invoice for half of the unit price of Unit One as stated in Section B, sub-CLIN 0009AA. After successful Section A5-1 acceptance testing, Unit One will be tested for Section A5-2 requirements acceptance. Upon successful completion of Section A5-2 acceptance testing, the contractor may invoice for the remainder of the unit price of Unit One.

(c) SiC Generator Controller Unit Two (hereafter referred to as Unit Two) will first be subjected to Section A5-2 testing to determine compliance with the requirements in the statement of work. The Government will conditionally accept Unit Two upon successful completion of Section A5-2 testing. Successful completion is defined as the Unit having met all of the testing requirements without any deficiencies or failures. Upon conditional acceptance of Unit Two, the contractor may invoice for half of the unit price for Unit Two as stated in Section B, sub-CLIN 0009AA. After successful completion of Section A5-2 acceptance testing, Unit Two will be tested for Section A5-1 requirements acceptance. Upon successful completion of Section A5-1 acceptance testing, the contractor may invoice for the remainder of the unit price of Unit Two.

(d) The Government anticipates Section A5-1 acceptance testing to be completed within two (2) months of receipt of Unit One. Within 60 calendar days after the Government receives Unit One, the Contracting Officer shall notify the contractor, in writing, of the conditional acceptance or rejection of Unit One.

(e) The Government anticipates Section A5-2 acceptance testing to be completed within two (2) months of receipt of Unit Two. Within 60 calendar days after the Government receives Unit Two, the Contracting Officer shall notify the contractor, in writing, of the conditional acceptance or rejection of Unit Two.

(f) The notice of conditional acceptance 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 acceptance shall state any further action required of the contractor. A notice of rejection of the unit shall cite reasons for the rejection.

(g) If the acceptance 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. If either unit is rejected, the contractor shall make any necessary changes, modifications, or repairs to the unit(s) at no additional increase to the contract price. Any and all costs related to any rework are to be borne by the contractor, including any costs for shipping the unit(s). The contractor shall furnish the corrected unit(s) to the Government under the terms and conditions and within the time specified by the Government. Retesting of the unit(s) will not be authorized until satisfactory evidence is furnished to the COR that all defects which were disclosed by previous acceptance testing have been corrected. The COR is solely responsible for determining whether the evidence furnished is satisfactory and if any specific retesting of the corrected units can be waived based on previously successful tests. The Government shall act on the unit(s) within the time limits specified in paragraphs (d) or (e) as applicable of this clause. 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 the acceptance tests.

(h) If the contractor fails to deliver any unit on time, or the Contracting Officer rejects any unit, the contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(i) If the Government does not act within the time specified in paragraph (d), (e), or (g) of this clause, 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.

E.2.10 Final Technical Report & As-Built Acceptance Criteria (CLIN 0010)

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-13-C-0349 <b>MOD/AMD</b>	<b>Page 32 of 59</b>
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**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

E.2.10.1 Final Technical Report (Sub-CLIN 0010AA): The Final Technical Report will be inspected by the COR for compliance with the requirements set forth in Section C.5.8 and CDRL A002. Any revisions required by the COR to meet compliance with the CDRL requirements and Section C.5.8 shall be made by the contractor IAW C.5.8 at no additional cost to the Government and prior to COR acceptance of the Final Technical Report.

E.2.10.2 As-Built (Sub-CLIN 0010AB): The As-Built functional diagrams, schematics, and PRO-E Compatible Models will be inspected by the COR for compliance with requirements of CDRL A006 and the requirements of C.2.5.4, C.4.3, C.5.4, and C.5.5. Any revisions required by the COR to meet compliance with the CDRL requirements or the Section C requirements shall be made by the contractor at no additional cost to the Government prior to COR acceptance of the diagrams, schematics, and PRO-E Compatible Models.

\*\*\* END OF NARRATIVE E0001 \*\*\*

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

SECTION F - DELIVERIES OR PERFORMANCE

This document 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 these addresses:

<http://farsite.hill.af.mil/VFFARA.HTM> or <http://farsite.hill.af.mil/VDFARA.HTM> or <http://farsite.hill.af.mil/VFAFARA.HTM>

If the clause requires additional or unique information, then that information is provided immediately after the clause title.

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
F-1	52.242-15	STOP-WORK ORDER	AUG/1989
F-2	52.242-17	GOVERNMENT DELAY OF WORK	APR/1984
F-3	52.247-34	F.O.B. DESTINATION	NOV/1991
F-4	252.211-7003	ITEM IDENTIFICATION AND VALUATION	JUN/2013

(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](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.

"Governments 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 Contractors 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 Contractors estimated fully burdened unit cost to the Government at the time of delivery.

"Issuing agency" means an organization responsible for assigning a globally unique identifier to an enterprise (e.g., Dun & Bradstreet's Data Universal Numbering System (DUNS) Number, GS1 Company Prefix, Allied Committee 135 NATO Commercial and Government Entity (NCAGE)/Commercial and Government Entity (CAGE) Code, or the Coded Representation of the North American Telecommunications Industry Manufacturers, Suppliers, and Related Service Companies (ATIS-0322000) Number), European Health Industry Business Communication Council (EHIBCC) and Health Industry Business Communication Council (HIBCC)), as indicated in the Register of Issuing Agency Codes for

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

ISO/IEC 15459, located at <http://www.nen.nl/web/Normen-ontwikkelen/ISOIEC-15459-Issuing-Agency-Codes.htm>.

"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](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 Governments unit acquisition cost is \$5,000 or more.

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

Contract Line,

Subline, or

Exhibit Line Item Number

Item Description


(iii) Subassemblies, components, and parts embedded within delivered items as specified in Attachment Number: NONE.

(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

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

(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).

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

(10) Governments 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](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), including subcontracts for commercial items.

(End of clause)

#### F.1 DELIVERIES

F.1.1 Unless otherwise directed elsewhere in this contract, any deliveries requiring a physical address shall be shipped to:

U.S. Army Tank-automotive and Armaments Command  
ATTN: RDTA-RS, MS121, Joseph Heuvers  
6501 E. 11 Mile Rd.  
Warren, Michigan 48397-5000

F.1.2 All deliveries shall be made in accordance with the dates as stated in Section C.5 "Deliverables" and the Contract Data Requirements List, and shall be packaged and marked in accordance with Section D.

F.1.3 All deliveries shall be made on an FOB Destination basis.

#### F.2 PERIOD OF PERFORMANCE

F.2.1 All effort required under this contract shall be completed within 24 months after contract award.

\*\*\* END OF NARRATIVE F0001 \*\*\*

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**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 37 of 59****PIIN/SIIN** W56HZV-13-C-0349**MOD/AMD**

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**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

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**CONTINUATION SHEET**

**Reference No. of Document Being Continued**

**Page 38 of 59**

**PIIN/SIIN** W56HZV-13-C-0349

**MOD/AMD**

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

SECTION G - CONTRACT ADMINISTRATION DATA

LINE	PRON/ AMS CD/ <u>ITEM</u> <u>MIPR</u>	OBLG <u>STAT</u>	JO NO/ <u>ACCT ASSIGN</u>	<u>ACRN</u>		OBLIGATED <u>AMOUNT</u>
0001AA	R32MC112R3	1	R.0008337.1.1	AA	\$	112,329.60
0002AA	R32MC112R3	1	R.0008337.1.1	AA	\$	163,448.00
0003AA	R32MC112R3	1	R.0008337.1.1	AA	\$	205,939.60
0004AA	R32MC112R3	1	R.0008337.1.1	AA	\$	339,090.28
0005AA	R32MC112R3	1	R.0008337.1.1	AA	\$	368,497.14
0006AA	R32MC112R3	1	R.0008337.1.1	AA	\$	57,149.00
0006AB	R32MC112R3	1	R.0008337.1.1	AA	\$	20,288.00
0006AC	R32MC112R3	1	R.0008337.1.1	AA	\$	40,085.00
0007AA	R32MC112R3	1	R.0008337.1.1	AA	\$	432,450.50
0008AA	R32MC112R3	1	R.0008337.1.1	AA	\$	11,381.00
0008AB	R32MC112R3	1	R.0008337.1.1	AA	\$	44,030.00
0009AA	R32MC112R3	1	R.0008337.1.1	AA	\$	633,506.58
0010AA	R32MC112R3	1	R.0008337.1.1	AA	\$	47,643.00
0010AB	R32MC112R3	1	R.0008337.1.1	AA	\$	23,174.00
					TOTAL	\$ 2,499,011.70

<u>ACRN</u>	<u>ACCOUNTING CLASSIFICATION</u>				<u>OBLIGATED AMOUNT</u>
AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001	\$ 2,499,011.70
TOTAL					\$ 2,499,011.70

LINE	<u>ACRN</u>	<u>EDI/SFIS ACCOUNTING CLASSIFICATION</u>			
0001AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0002AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0003AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0004AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0005AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0006AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001

**CONTINUATION SHEET**

**Reference No. of Document Being Continued**

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

LINE ITEM	ACRN	EDI/SFIS ACCOUNTING CLASSIFICATION			
0006AB	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0006AC	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0007AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0008AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0008AB	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0009AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0010AA	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001
0010AB	AA	021 201220132040	A60FL 622705EM4RK20	2550 L033619947 R.0008337.1.1	021001

Regulatory Cite \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

G-1 252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS MAY/2013

(a) Definitions. As used in this clause--

"Department of Defense Activity Address Code (DoDAAC)" is a six position code that uniquely identifies a unit, activity, or organization.

"Document type" means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

"Local processing office (LPO)" is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) Electronic invoicing. The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor shall--

(1) Have a designated electronic business point of contact in the System for Award Management at <https://www.acquisition.gov/> and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this Web site.

(d) WAWF training. The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the "Web Based Training" link on the WAWF home page at <https://wawf.eb.mil/>.

(e) WAWF methods of document submission. Document submissions may be via Web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) WAWF payment instructions. The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order:

(1) Document type. The Contractor shall use the following document type(s).

**COMBO**

(2) Inspection/acceptance location. The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

W91ATL  
 U.S. ARMY TANK-AUTOMOTIVE AND ARMAMENTS COMMAND  
 ATTN: RDTA-RS, MS 121, JOSEPH HEUVERS  
 6501 E. 11 MILE ROAD  
 WARREN, MI 48397-5000

(3) Document routing. The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table\*

-----  
 Field Name in WAWF                      Data to be entered in WAWF

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 40 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

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Pay Official DoDAAC	HQ0338
Issue By DoDAAC	W56HZV
Admin DoDAAC	S2404A
Inspect By DoDAAC	W91ATL
Ship To Code	W91ATL
Ship From Code	INSERT CONTRACTOR LOCATION DoDDAC
Mark For Code	N/A
Service Approver (DoDAAC)	W91ATL
Service Acceptor (DoDAAC)	W91ATL
Accept at Other DoDAAC	N/A
LPO DoDAAC	N/A
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	N/A

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(4) Payment request and supporting documentation. The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) WAWF email notifications. The Contractor shall enter the email address identified below in the "Send Additional Email Notifications" field of WAWF once a document is submitted in the system.

CONTRACTING OFFICER'S REPRESENTATIVE  
JOSEPH.K.HEUVERS.CIV@MAIL.MIL

(g) WAWF point of contact. (1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.

N/A

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.

(End of clause)

G-2 52.242-4016 COMMUNICATIONS

FEB/2013

Communications on technical matters pertaining to the contract shall be direct between the contractor and the Contracting Officer Representative (COR). Communications for the COR shall be addressed to:

Name: Joe Heuvers  
E-mail: joseph.k.heuvers.civ@mailmil

The Administrative Contracting Officer's (ACO) name and email address are also provided if known at this time:

ACO: Todd Hinkie  
E-mail: Todd.Hinkie@dcma.mil

Please see the appointment letters prepared at time of contract award for functions the Technical Representative and ACO will perform on this contract.

[End of Clause]

G-3 252.204-0005 PAYMENT INSTRUCTIONS FOR THE DEFENSE FINANCE AND ACCOUNTING SERVICE  
(DFARS PGI) (DFAS) - Line Item Specific: by Cancellation Date

SEP/2009

The payment office shall make payment using the ACRN with the earliest cancellation date first, exhausting all funds in that ACRN before disbursing funds from the next. In the event there is more than one ACRN associated with the same cancellation date, the payment amount

**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 41 of 59****PIIN/SIIN** W56HZV-13-C-0349**MOD/AMD****Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

shall be disbursed from each ACRN with the same cancellation date in the same proportion as the amount of funding obligated for each ACRN with the same cancellation date.

[End of Clause]

G-4 52.227-4004 RELEASE OF INFORMATION  
(TACOM)

OCT/2012

The contractor shall ensure that he complies with the requirements of Chapter 5, page 22, paragraph 5-48, of AR 360-1, The Army Public Affairs Program, dated 15 Sep 2000, prior to contemplated release of any procurement information. Approval of the Contracting Officer is required prior to release of any such information. AR 360-1 may be found at

[www.asaie.army.mil/Public/IE/Toolbox/documents/r360\\_1.pdf](http://www.asaie.army.mil/Public/IE/Toolbox/documents/r360_1.pdf)

[End of Clause]

G-5 52.232-4087 PAYMENT UNDER WIDE AREA WORKFLOW (ACC WARREN)

AUG/2012

To obtain payment, WAWF requires the contractor to input/indicate the various DoDAAC (Department of Defense Activity Address Code) codes that apply to the acquisition. These codes can be found on the cover page of contracts/orders as described below.

The document type the contractor shall use is as follows:

- "Combo" is entered if the award is for supplies or supplies and services are being delivered.
- "2in1" is entered if the award is strictly for services being provided/delivered.

USE THE FOLLOWING CODES TO ROUTE YOUR INVOICES THROUGH WAWF:

- Your firms CAGE code (found in Block 15A of SF 33; Block 17a of SF 1449; Block 14 of SF 1442; Block 7 of SF 26)
- Issue and Admin DoDAAC Code (found in Block 7 of SF 33; Block 9 of SF 1449; Block 7 of SF 1442; Block 5 of SF 26)
- Ship-To DoDAAC Code (if deliverables are involved) (found in Section B of the contract where SF 33, SF 1442, or SF 26 is the cover page; Block 15 of SF 1449)
- Accept-By DoDAAC Code: If Inspection/Acceptance is Origin, use the Admin (DCMA)DoDAAC or the DoDAAC of the inspection/acceptance office if different than the Admin DoDAAC; if Destination, use the Ship-To DoDAAC Code. If Accepted-By Other: enter the DoDAAC of the activity designated to perform acceptance.
- Payment DoDAAC Code. (found in Block 25 of SF 33; Block 18a of SF 1449; Block 27 of SF 1442; Block 12 of SF 26)

The paying office DoDAAC and mailing address is located on the first page of the award. To track the status of your invoice, click on the link, Pay status (myInvoice-External link) at the bottom of the left-hand menu.

If your paying office is Columbus, direct any payment-related questions to the Defense Finance Accounting Services (DFAS) Columbus at 1-888-756-4571. Please have your order number and invoice ready when calling about payment status. If your paying office is other than Columbus, contact your contract administrator for the customer service phone/fax numbers.

[End of Clause]

**G.1 CONTRACTOR: SPECIAL BILLING INSTRUCTIONS:**

G.1.1 The contractor shall bill to the six-digit Sub-Line Item Number (SLIN) and ACRN under the four-digit Contract Lin Item Number (CLIN) for which the work effort was performed in accordance with DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

**G.2 Wide Area Workflow (WAWF) Notification**

G.2.1 The contractor must notify the Contracting Officers Representative (COR) by e-mail whenever an invoice or public voucher is placed into WAWF for processing and payment. This notification is to ensure timely processing and payment for the invoice or public voucher. The COR needs to review the invoice or public voucher before approval.

\*\*\* END OF NARRATIVE G0001 \*\*\*

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**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 42 of 59****PIIN/SIIN** W56HZV-13-C-0349**MOD/AMD**

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**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

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<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-13-C-0349 <b>MOD/AMD</b>	<b>Page 43 of 59</b>
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**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

SECTION H - SPECIAL CONTRACT REQUIREMENTS

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
H-1	252.222-7006	RESTRICTIONS ON THE USE OF MANDATORY ARBITRATION AGREEMENTS	DEC/2010
H-2	52.204-4005	REQUIRED USE OF ELECTRONIC CONTRACTING	AUG/2012

(a) All contract awards, modifications and delivery orders issued by Army Contracting Command - Warren (DTA) will be issued electronically. The contractor has the option to receive these actions either via the Worldwide Web (WWW) or Electronic Data Interchange (EDI). Many provisions/clauses that appear "by reference," meaning only clause titles and regulation site are listed; their full texts can be found at the website <http://farsite.hill.af.mil/>

(b) In order to be eligible to receive an award under this solicitation, the successful offeror must be registered with the Department of Defense (DOD) System for Award Management (SAM). The SAM registration process may be done electronically at the World Wide Web (WWW) site: <https://www.sam.gov/portal/public/SAM>. (In order to be registered to use EDI, you must use the long form for registration. Certification information, including information on the EDI 838 TPP, must be furnished to the Contracting Officer within 60 calendar days after contract award to complete networking requirements within the Government.)

(c) Worldwide Web Distribution. The contractor will receive an electronic Notice of the Award, Modification, or Delivery Order via e-mail. If you choose the WWW option, you must download the file from the appropriate Army Contracting Command - Warren webpage:

Warren: [http://contracting.tacom.army.mil/CFDATA/AWARDS/AWARD\\_RPT01.cfm](http://contracting.tacom.army.mil/CFDATA/AWARDS/AWARD_RPT01.cfm)  
 Rock Island - JMTC: <https://acquisition.army.mil/asfi/>  
 Red River Army Depot: <https://acquisition.army.mil/asfi/>  
 Anniston Army Depot: <https://acquisition.army.mil/asfi/>

(d) Electronic Data Interchange. If you choose to receive contract awards, modifications and delivery orders through EDI, they will be delivered electronically via the Federal Acquisition Network (FACNET). Federal Standard Version 3050 of Standard X12 from the American National Standards Institute (ANSI) will be used as the format for these electronic transactions.

(1) You must complete the EDI 838 Trading Partner Profile, and must agree (i) to subcontract with a DoD certified VAN or Value Added Service (VAS) provider, or (ii) to become DoD certified as a Value Added Network (VAN). The EDI 838 Training Partner Profile is contained in the basic SAM registration form and includes portions of the registration form which are titled "Optional".

(2) You must select a VAN from the official DoD approved list. DoD Certified VANs are listed at <http://www.acq.osd.mil/dpap/ebiz/VANs.htm>. If your VAN is later removed from the official list, or if you voluntarily drop your initially selected VAN, then you must switch to a VAN that remains on the official DoD approved list. You must maintain an active account on a DoD approved VAN for the entire duration of the contract, beginning no later than the 60th day after award.

(e) Unless otherwise specified elsewhere in the contract, all data items you are required to provide under this contract must be submitted electronically. Please go to the following webpage for detailed information about submitting your offer electronically: <http://contracting.tacom.army.mil/acqinfo/ebidnotice.htm>

(f) Additional information can be obtained by sending a message to: [usarmy.detroit.acc.mbx.wrn-web-page@mail.mil](mailto:usarmy.detroit.acc.mbx.wrn-web-page@mail.mil) or by calling (586) 282-7059.

H.1 Government Laboratory Facilities

H.1.1 The Government will allow rent free use of the TARDEC laboratory facilities and services located at the Detroit Arsenal Installation between 01 August 2014 and 01 March 2015 to conduct the preliminary testing required by Attachment 0005 to the contract and any additional voluntary pre-acceptance testing the contractor requires to validate its design for the SiC Generator Controller unit(s) and establish that the units will likely meet all of the Government acceptance testing criteria stated in Attachment 0005. The preliminary testing and any additional voluntary pre-acceptance testing is completely separate from any acceptance testing the Government will conduct for acceptance of the SiC Generator Controller units in accordance with Section E.2.5.

H.1.1.1 The TARDEC laboratory facilities and services will include rent free use of the TARDEC Labs, personnel to assist in the operation of the tests, and applicable test equipment during the timeframe specified in H.1.1. Any personnel needed to actually conduct the pre-acceptance testing and any supplies, unique equipment, or fixtures needed, will be at contractors own expense. Any testing necessary outside of the above timeframe shall be coordinated and conducted by the contractor outside of the TARDEC Laboratories.

H.1.2. The contractor shall annotate below whether the TARDEC laboratory facilities and services will be utilized for this requirement. If electing to use the TARDEC Laboratory facilities and services, the contractor shall annotate the estimated number of days the TARDEC Laboratories will be used.

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 44 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Yes, the TARDEC Laboratory facilities and services will be utilized for this voluntary pre-acceptance testing for an estimated 55 days of testing.

No, the TARDEC Laboratory facilities and services will NOT be utilized for this pre-acceptance testing.

H.1.2.1 Offerors opting not to use the TARDEC laboratory facilities and services at the time of proposal submission shall not be granted rent free use of the TARDEC laboratory services after contract award. Any request for use of the TARDEC laboratories after contract award shall be an equitable adjustment to the contract.

H.1.3 The contractor shall be responsible for all fixturing, debugging, test loads not already available in the TARDEC labs, and tooling required to perform the pre-acceptance tests in the TARDEC labs. Any fixturing, test loads, and tooling required for the Government to conduct the acceptance tests in accordance with Section E.2.5 at the TARDEC lab shall be a deliverable under this contract as stated in section C.3.2 and C.5.9. At any time during Government acceptance testing, the contractor shall be responsible for repairing the contractor furnished fixturing, test loads, and tools that fail during conduct of the Government acceptance tests at no additional cost to the Government.

H.1.3.1 The contractor shall provide contractor support personnel to set up and oversee the execution of any pre-acceptance testing performed in the TARDEC labs. The Government acceptance testing will be conducted exclusively by Government personnel. The contractor is not required to be present for Government acceptance testing.

H.1.3.2 The contractor shall be responsible for any loss, damage, or destruction of the SiC Generator Controller units during any pre-acceptance testing performed in the TARDEC labs. The Government assumes no liability for the SiC Generator Controller units. The contractor shall also be liable for any injuries to Government personnel, and any damage to United States Government property and equipment resulting from the execution of any preliminary tests of the SiC Generator Controller units performed in the TARDEC labs.

H.1.4. The contractor shall request access to the TARDEC laboratories for conducting pre-acceptance testing of the SiC Generator Controller unit(s) no later than 60 days before the requested testing date. The contractor shall deliver the SiC Generator Controller units for Government acceptance testing in accordance with the time periods stated in Section F.1.2.

**H.2 Building Security and Installation Regulations**

H.2.1 Locations of the laboratories to be used during the resulting contract include areas that are "closed" to the public, and as such, only those persons granted permission may enter. The Contractor shall coordinate with the Installation Security Office to obtain an identification badge for each employee and vehicle. All Contractor employees must wear the badge in a visible location at all times while working at the facility. Personnel shall not enter restricted areas unless required to do so and only upon prior approval. If the contractor is unable to access the laboratories, it shall not excuse the Contractor from full compliance with the terms and conditions of this contract.

H.2.1.1 All contractor personnel accessing the TARDEC Labs MUST be United States citizens.

H.2.2 The Contractor shall be responsible for compliance with all regulations and orders of the Detroit Arsenal Installation, respecting identification of employees, movements on installation, parking, truck entry, and all other regulations, which may apply under the circumstances. The Contractor, his employees, and subcontractors shall become familiar with and obey the regulations of the installation including fire, safety and security regulations while on the Detroit Arsenal Installation. The contractor shall comply with all regulations governing the operation of motor vehicles on the installation.

\*\*\* END OF NARRATIVE H0001 \*\*\*

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 45 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

## SECTION I - CONTRACT CLAUSES

This document 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 these addresses:

<http://farsite.hill.af.mil/VFFARA.HTM> or <http://farsite.hill.af.mil/VDFARA.HTM> or <http://farsite.hill.af.mil/VFAFARA.HTM>

If the clause requires additional or unique information, then that information is provided immediately after the clause title.

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-1	52.202-1	DEFINITIONS	JAN/2012
I-2	52.203-3	GRATUITIES	APR/1984
I-3	52.203-5	COVENANT AGAINST CONTINGENT FEES	APR/1984
I-4	52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	SEP/2006
I-5	52.203-7	ANTI-KICKBACK PROCEDURES	OCT/2010
I-6	52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-7	52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-8	52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	OCT/2010
I-9	52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON POSTCONSUMER FIBER CONTENT PAPER	MAY/2011
I-10	52.204-10	REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS	JUL/2013
I-11	52.204-13	SYSTEM FOR AWARD MANAGEMENT MAINTENANCE	JUL/2013
I-12	52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	AUG/2013
I-13	52.209-9	UPDATES OF PUBLICLY AVAILABLE INFORMATION REGARDING RESPONSIBILITY MATTERS	JUL/2013
I-14	52.211-5	MATERIAL REQUIREMENTS	AUG/2000
I-15	52.211-15	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS	APR/2008
I-16	52.215-2	AUDIT AND RECORDS--NEGOTIATIONS	OCT/2010
I-17	52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT	OCT/1997
I-18	52.215-14	INTEGRITY OF UNIT PRICES	OCT/2010
I-19	52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS	JUL/2013
I-20	52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN (JUL 2013) -- ALTERNATE II (OCT 2001)	OCT/2001
I-21	52.219-16	LIQUIDATED DAMAGES--SUBCONTRACTING PLAN	JAN/1999
I-22	52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES	FEB/1997
I-23	52.222-19	CHILD LABOR--COOPERATION WITH AUTHORITIES AND REMEDIES	MAR/2012
I-24	52.222-20	WALSH-HEALEY PUBLIC CONTRACTS ACT	OCT/2010
I-25	52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB/1999
I-26	52.222-26	EQUAL OPPORTUNITY	MAR/2007
I-27	52.222-35	EQUAL OPPORTUNITY FOR VETERANS	SEP/2010
I-28	52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	OCT/2010
I-29	52.222-37	EMPLOYMENT REPORTS ON VETERANS	SEP/2010
I-30	52.222-40	NOTIFICATION OF EMPLOYEE RIGHTS UNDER THE NATIONAL LABOR RELATIONS ACT	DEC/2010
I-31	52.222-50	COMBATING TRAFFICKING IN PERSONS	FEB/2009
I-32	52.222-54	EMPLOYMENT ELIGIBILITY VERIFICATION	AUG/2013
I-33	52.223-5	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION	MAY/2011
I-34	52.223-6	DRUG-FREE WORKPLACE	MAY/2001
I-35	52.223-18	ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING	AUG/2011
I-36	52.223-19	COMPLIANCE WITH ENVIRONMENTAL MANAGEMENT SYSTEMS	MAY/2011
I-37	52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	JUN/2008
I-38	52.227-1	AUTHORIZATION AND CONSENT (DEC 2007) -- ALTERNATE I (APR 1984)	APR/1984
I-39	52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	DEC/2007
I-40	52.229-3	FEDERAL, STATE, AND LOCAL TAXES	FEB/2013
I-41	52.232-2	PAYMENTS UNDER FIXED-PRICE RESEARCH AND DEVELOPMENT CONTRACTS	APR/1984
I-42	52.232-8	DISCOUNTS FOR PROMPT PAYMENT	FEB/2002
I-43	52.232-11	EXTRAS	APR/1984
I-44	52.232-17	INTEREST	OCT/2010
I-45	52.232-23	ASSIGNMENT OF CLAIMS (JAN 1986) -- ALTERNATE I (APR 1984)	APR/1984
I-46	52.232-25	PROMPT PAYMENT	JUL/2013
I-47	52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER--SYSTEM FOR AWARD MANAGEMENT	JUL/2013

## CONTINUATION SHEET

## Reference No. of Document Being Continued

Page 46 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-48	52.233-1	DISPUTES	JUL/2002
I-49	52.233-3	PROTEST AFTER AWARD	AUG/1996
I-50	52.233-4	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM	OCT/2004
I-51	52.242-4	CERTIFICATION OF FINAL INDIRECT COSTS	JAN/1997
I-52	52.242-13	BANKRUPTCY	JUL/1995
I-53	52.243-1	CHANGES--FIXED PRICE (AUG 1987) -- ALTERNATE V (APR 1984)	APR/1984
I-54	52.244-5	COMPETITION IN SUBCONTRACTING	DEC/1996
I-55	52.246-24	LIMITATION OF LIABILITY--HIGH-VALUE ITEMS	FEB/1997
I-56	52.247-63	PREFERENCE FOR U.S.-FLAG AIR CARRIERS	JUN/2003
I-57	52.247-68	REPORT OF SHIPMENT (REPSHIP)	FEB/2006
I-58	52.249-2	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE)	APR/2012
I-59	52.249-8	DEFAULT (FIXED-PRICE SUPPLY AND SERVICE)	APR/1984
I-60	52.249-9	DEFAULT (FIXED-PRICE RESEARCH AND DEVELOPMENT)	APR/1984
I-61	52.253-1	COMPUTER GENERATED FORMS	JAN/1991
I-62	252.201-7000	CONTRACTING OFFICER'S REPRESENTATIVE	DEC/1991
I-63	252.203-7000	REQUIREMENTS RELATING TO COMPENSATION OF FORMER DOD OFFICIALS	SEP/2011
I-64	252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE-CONTRACT-RELATED FELONIES	DEC/2008
I-65	252.203-7002	REQUIREMENT TO INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS	JAN/2009
I-66	252.203-7003	AGENCY OFFICE OF THE INSPECTOR GENERAL	DEC/2012
I-67	252.204-7000	DISCLOSURE OF INFORMATION	AUG/2013
I-68	252.204-7002	PAYMENT FOR SUBLINE ITEMS NOT SEPARATELY PRICED	DEC/1991
I-69	252.204-7003	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT	APR/1992
I-70	252.204-7004	ALTERNATE A, SYSTEM FOR AWARD MANAGEMENT	MAY/2013
I-71	252.204-7006	BILLING INSTRUCTIONS	OCT/2005
I-72	252.204-7008	EXPORT-CONTROLLED ITEMS	APR/2010
I-73	252.205-7000	PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS	DEC/1991
I-74	252.209-7004	SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY	DEC/2006
I-75	252.215-7000	PRICING ADJUSTMENTS	DEC/2012
I-76	252.219-7003	SMALL BUSINESS SUBCONTRACTING PLAN (DoD CONTRACTS)	AUG/2012
I-77	252.223-7006	PROHIBITION ON STORAGE AND DISPOSAL OF TOXIC AND HAZARDOUS MATERIALS	APR/2012
I-78	252.223-7008	PROHIBITION OF HEXAVALENT CHROMIUM	JUN/2013
I-79	252.225-7001	BUY AMERICAN AND BALANCE OF PAYMENTS PROGRAM	DEC/2012
I-80	252.225-7002	QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS	DEC/2012
I-81	252.225-7006	QUARTERLY REPORTING OF ACTUAL CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES	OCT/2010
I-82	252.225-7007	PROHIBITION ON ACQUISITION OF UNITED STATES MUNITIONS LIST ITEMS FROM COMMUNIST CHINESE MILITARY COMPANIES	SEP/2006
I-83	252.225-7012	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	FEB/2013
I-84	252.225-7013	DUTY-FREE ENTRY	JUN/2012
I-85	252.225-7015	RESTRICTION ON ACQUISITION OF HAND OR MEASURING TOOLS	JUN/2005
I-86	252.225-7016	RESTRICTION ON ACQUISITION OF BALL AND ROLLER BEARINGS	JUN/2011
I-87	252.225-7033	WAIVER OF UNITED KINGDOM LEVIES	APR/2003
I-88	252.226-7001	UTILIZATION OF INDIAN ORGANIZATIONS, INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS	SEP/2004
I-89	252.227-7013	RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS	JUN/2013
I-90	252.227-7014	RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION	MAY/2013
I-91	252.227-7015	TECHNICAL DATA--COMMERCIAL ITEMS	JUN/2013
I-92	252.227-7016	RIGHTS IN BID OR PROPOSAL INFORMATION	JAN/2011
I-93	252.227-7019	VALIDATION OF ASSERTED RESTRICTIONS--COMPUTER SOFTWARE	SEP/2011
I-94	252.227-7025	LIMITATIONS ON THE USE OR DISCLOSURE OF GOVERNMENT-FURNISHED INFORMATION MARKED WITH RESTRICTIVE LEGENDS	MAY/2013
I-95	252.227-7026	DEFERRED DELIVERY OF TECHNICAL DATA OR COMPUTER SOFTWARE	APR/1988
I-96	252.227-7027	DEFERRED ORDERING OF TECHNICAL DATA OR COMPUTER SOFTWARE	APR/1988
I-97	252.227-7030	TECHNICAL DATA--WITHHOLDING OF PAYMENT	MAR/2000
I-98	252.227-7037	VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA	JUN/2013
I-99	252.231-7000	SUPPLEMENTAL COST PRINCIPLES	DEC/1991
I-100	252.232-7003	ELECTRONIC SUBMISSION OF PAYMENT REQUESTS AND RECEIVING REPORTS	JUN/2012
I-101	252.232-7010	LEVIES ON CONTRACT PAYMENTS	DEC/2006
I-102	252.235-7011	FINAL SCIENTIFIC OR TECHNICAL REPORT	NOV/2004

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 47 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-103	252.237-7010	PROHIBITION ON INTERROGATION OF DETAINEES BY CONTRACTOR PERSONNEL	JUN/2013
I-104	252.242-7004	MATERIAL MANAGEMENT AND ACCOUNTING SYSTEM	MAY/2011
I-105	252.242-7006	ACCOUNTING SYSTEM ADMINISTRATION	FEB/2012
I-106	252.243-7001	PRICING OF CONTRACT MODIFICATIONS	DEC/1991
I-107	252.243-7002	REQUESTS FOR EQUITABLE ADJUSTMENT	DEC/2012
I-108	252.244-7000	SUBCONTRACTS FOR COMMERCIAL ITEMS	JUN/2013
I-109	252.246-7000	MATERIAL INSPECTION AND RECEIVING REPORT	MAR/2008
I-110	252.246-7001	WARRANTY OF DATA	DEC/1991
I-111	252.247-7023	TRANSPORTATION OF SUPPLIES BY SEA	JUN/2013
I-112	252.247-7024	NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA	MAR/2000
I-113	52.232-16	PROGRESS PAYMENTS	APR/2012

The Government will make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly in amounts of \$2,500 or more approved by the Contracting Officer, under the following conditions:

(a) Computation of amounts.

(1) Unless the Contractor requests a smaller amount, the Government will compute each progress payment as 80 percent of the Contractor's total costs incurred under this contract whether or not actually paid, plus financing payments to subcontractors (see paragraph (j) of this clause), less the sum of all previous progress payments made by the Government under this contract. The Contracting Officer will consider cost of money that would be allowable under FAR 31.205-10 as an incurred cost for progress payment purposes.

(2) The amount of financing and other payments for supplies and services purchased directly for the contract are limited to the amounts that have been paid by cash, check, or other forms of payment, or that are determined due will be paid to subcontractors--

(i) In accordance with the terms and conditions of a subcontract of invoice; and

(ii) Ordinarily within 30 days of the submission of the Contractor's payment request to the Government.

(3) The Government will exclude accrued costs of Contractor contributions under employee pension plans until actually paid unless--

(i) The Contractor's practice is to make contributions to the retirement fund quarterly or more frequently; and

(ii) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contribution remaining unpaid shall be excluded from the Contractor's total costs for progress payments until paid).

(4) The Contractor shall not include the following in total costs for progress payment purposes in paragraph (a)(1) of this clause:

(i) Costs that are not reasonable, allocable to this contract, and consistent with sound and generally accepted accounting principles and practices.

(ii) Costs incurred by subcontractors or suppliers.

(iii) Costs ordinarily capitalized and subject to depreciation or amortization except for the properly depreciated or amortized portion of such costs.

(iv) Payments made or amounts payable to the subcontractors or suppliers, except for--

(A) completed work, including partial deliveries, to which the Contractor has acquired title; and

(B) Work under cost-reimbursement or time-and-material subcontracts to which the Contractor has acquired title.

(5) The amount of unliquidated progress payments may exceed neither (i) the progress payments made against incomplete work (including allowable unliquidated progress payments to subcontractors) nor (ii) the value, for progress payment purposes, of the incomplete work. Incomplete work shall be considered to be the supplies and services required by this contract, for which delivery and invoicing by the Contractor and acceptance by the Government are incomplete.

(6) The total amount of progress payments shall not exceed 80 percent of the total contract price.

(7) If a progress payment or the unliquidated progress payments exceed the amounts permitted by subparagraphs (a)(4) or (a)(5) above,

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

the Contractor shall repay the amount of such excess to the Government on demand.

(8) Notwithstanding any other terms of the contract, the Contractor agrees not to request progress payments in dollar amounts of less than \$2,500. The Contracting Officer may make exceptions.

(9) The costs applicable to items delivered, invoiced, and accepted shall not include costs in excess of the contract price of the items.

(b) Liquidation. Except as provided in the Termination for Convenience of the Government clause, all progress payments shall be liquidated by deducting from any payment under this contract, other than advance or progress payments, the unliquidated progress payments, or 80 percent of the amount invoiced, whichever is less. The Contractor shall repay to the Government any amounts required by a retroactive price reduction, after computing liquidations and payments on past invoices at the reduced prices and adjusting the unliquidated progress payments accordingly. The Government reserves the right to unilaterally change from the ordinary liquidation rate to an alternate rate when deemed appropriate for proper contract financing.

(c) Reduction or suspension. The Contracting Officer may reduce or suspend progress payments, increase the rate of liquidation, or take a combination of these actions, after finding on substantial evidence any of the following conditions:

(1) The Contractor failed to comply with any material requirement of this contract (which includes paragraphs (f) and (g) below).

(2) Performance of this contract is endangered by the Contractors --

- (i) Failure to make progress; or
- (ii) Unsatisfactory financial condition.

(3) Inventory allocated to this contract substantially exceeds reasonable requirements.

(4) The Contractor is delinquent in payment of the costs of performing this contract in the ordinary course of business.

(5) The fair value of the undelivered work is less than the amount of unliquidated progress payments for that work.

(6) The Contractor is realizing less profit than that reflected in the establishment of any alternate liquidation rate in paragraph (b) above, and that rate is less than the progress payment rate stated in subparagraph (a)(1) above.

(d) Title.

(1) Title to the property described in this paragraph (d) shall vest in the Government. Vestiture shall be immediately upon the date of this contract, for property acquired or produced before that date. Otherwise, vestiture shall occur when the property is or should have been allocable or properly chargeable to this contract.

(2) Property, as used in this clause, includes all of the below-described items acquired or produced by the Contractor that are or should be allocable or properly chargeable to this contract under sound and generally accepted accounting principles and practices.

(i) Parts, materials, inventories, and work in process;

(ii) Special tooling and special test equipment to which the Government is to acquire title;

(iii) Nondurable (i.e., noncapital) tools, jigs, dies, fixtures, molds, patterns, taps, gauges, test equipment, and other similar manufacturing aids, title to which would not be obtained as special tooling under subparagraph (ii) above; and

(iv) Drawings and technical data, to the extent the Contractor or subcontractors are required to deliver them to the Government by other clauses of this contract.

(3) Although title to property is in the Government under this clause, other applicable clauses of this contract; e.g., the termination clauses, shall determine the handling and disposition of the property.

(4) The Contractor may sell any scrap resulting from production under this contract without requesting the Contracting Officers approval, but the proceeds shall be credited against the costs of performance.

(5) To acquire for its own use or dispose of property to which title is vested in the Government under this clause, the Contractor must obtain the Contracting Officers advance approval of the action and the terms. The Contractor shall

(i) exclude the allocable costs of the property from the costs of contract performance, and

(ii) repay to the Government any amount of unliquidated progress payments allocable to the property. Repayment may be by cash or

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

credit memorandum.

(6) When the Contractor completes all of the obligations under this contract, including liquidation of all progress payments, title shall vest in the Contractor for all property (or the proceeds thereof) not --

(i) Delivered to, and accepted by, the Government under this contract; or

(ii) Incorporated in supplies delivered to, and accepted by, the Government under this contract and to which title is vested in the Government under this clause.

(7) The terms of this contract concerning liability for Government-furnished property shall not apply to property to which the Government acquired title solely under this clause.

(e) Risk of loss. Before delivery to and acceptance by the Government, the Contractor shall bear the risk of loss for property, the title to which vests in the Government under this clause, except to the extent the Government expressly assumes the risk. The Contractor shall repay the Government an amount equal to the unliquidated progress payments that are based on costs allocable to property that is lost (see 45.101).

(f) Control of costs and property. The Contractor shall maintain an accounting system and controls adequate for the proper administration of this clause.

(g) Reports, forms, and access to records.

(1) The Contractor shall promptly furnish reports, certificates, financial statements, and other pertinent information (including estimates to complete) reasonably requested by the Contracting Officer for the administration of this clause. Also, the Contractor shall give the Government reasonable opportunity to examine and verify the Contractor's books, records, and accounts.

(2) The Contractor shall furnish estimates to complete that have been developed or updated within six months of the date of the progress payment request. The estimates to complete shall represent the Contractor's best estimate of total costs to complete all remaining contract work required under the contract. The estimates shall include sufficient detail to permit Government verification.

(3) Each Contractor request for progress payment shall:

(i) Be submitted on Standard Form 1443, Contractor's Request for Progress Payment, or the electronic equivalent as required by agency regulations, in accordance with the form instructions and the contract terms; and

(ii) Include any additional supporting documentation requested by the Contracting Officer.

(h) Special terms regarding default. If this contract is terminated under the Default clause,

(i) the Contractor shall, on demand, repay to the Government the amount of unliquidated progress payments and

(ii) title shall vest in the Contractor, on full liquidation of progress payments, for all property for which the Government elects not to require delivery under the Default clause. The Government shall be liable for no payment except as provided by the Default clause.

(i) Reservations of rights.

(1) No payment or vesting of title under this clause shall --

(i) Excuse the Contractor from performance of obligations under this contract; or

(ii) Constitute a waiver of any of the rights or remedies of the parties under the contract.

(2) The Governments rights and remedies under this clause --

(i) Shall not be exclusive but rather shall be in addition to any other rights and remedies provided by law or this contract; and

(ii) Shall not be affected by delayed, partial, or omitted exercise of any right, remedy, power, or privilege, nor shall such exercise or any single exercise preclude or impair any further exercise under this clause or the exercise of any other right, power, or privilege of the Government.

(j) Financing payments to subcontractors. The financing payments to subcontractors mentioned in paragraphs (a)(1) and (a)(2) of this clause shall be all financing payments to subcontractors or divisions, if the following conditions are met:

**CONTINUATION SHEET****Reference No. of Document Being Continued**

Page 50 of 59

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

(1) The amounts included are limited to --

(i) The unliquidated remainder of financing payments made; plus

(ii) Any unpaid subcontractor requests for financing payments.

(2) The subcontract or interdivisional order is expected to involve a minimum of approximately 6 months between the beginning of work and the first delivery, or, if the subcontractor is a small business concern, 4 months.

(3) If the financing payments are in the form or progress payments, the terms of the subcontract or interdivisional order concerning progress payments --

(i) Are substantially similar to the terms of the clause for any subcontractor that is a large business concern, or that clause with its Alternate I for any subcontractor that is a small business concern;

(ii) Are at least as favorable to the Government as the terms of this clause;

(iii) Are not more favorable to the subcontractor or division than the terms of this clause are to the Contractor;

(iv) Are in conformance with the requirements of FAR 32.504(e); and

(v) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if --

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(4) If the financing payments are in the form of performance-based payments, the terms of the subcontract or interdivisional order concerning payments--

(i) Are substantially similar to the Performance-Based Payments clause at FAR 52.232-32 and meet the criteria for, and definition of, performance-based payments in FAR Part 32;

(ii) Are in conformance with the requirements of FAR 32.504(f); and

(iii) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if--

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(5) If the financing payments are in the form of commercial item financing payments, the terms of the subcontract or interdivisional order concerning payments

(i) Are constructed in accordance with FAR 32.206(c) and included in a subcontract for a commercial item purchase that meets the definition and standards for acquisition of commercial items in FAR Part 2 and 12;

(ii) Are in conformance with the requirements of FAR 32.504(g); and

(iii) Subordinate all subcontractor rights concerning property to which the Government has title under the subcontract to the Government's right to require delivery of the property to the Government if--

(A) The Contractor defaults; or

(B) The subcontractor becomes bankrupt or insolvent.

(6) If financing is in the form of progress payments, the progress payment rate in the subcontract is the customary rate used by the contracting agency, depending on whether the subcontractor is or is not a small business concern.

(7) Concerning any proceeds received by the Government for property to which title has vested in the Government under the subcontract terms, the parties agree that the proceeds shall be applied to reducing any unliquidated financing payments by the Government to the Contractor under this contract.

(8) If no unliquidated financing payments to the Contractor remain, but there are unliquidated financing payments that the Contractor

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>	<b>Page 51 of 59</b>
	PIIN/SIIN W56HZV-13-C-0349	MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

has made to any subcontractor, the Contractor shall be subrogated to all the rights the Government obtained through the terms required by this clause to be in any subcontract, as if all such rights had been assigned and transferred to the Contractor.

(9) To facilitate small business participation in subcontracting under this contract, the Contractor shall provide financing payments to small business concerns, in conformity with the standards for customary contract financing payments stated in Subpart 32.113. The Contractor shall not consider the need for such financing payments as a handicap or adverse factor in the award of subcontracts.

(k) Limitations on undefinitized contract actions. Notwithstanding any other progress payment provisions in this contract, progress payments may not exceed 80 percent of costs incurred on work accomplished under undefinitized contract actions. A contract action is any action resulting in a contract, as defined in Subpart 2.1, including contract modifications for additional supplies or services, but not including contract modifications that are within the scope and under the terms of the contract, such as contract modifications issued pursuant to the Changes clause, or funding and other administrative changes. This limitation shall apply to the costs incurred, as computed in accordance with paragraph (a) of this clause, and shall remain in effect until the contract action is definitized. Costs incurred which are subject to this limitation shall be segregated on Contractor progress payment requests and invoices from those costs eligible for higher progress payment rates. For purposes of progress payment liquidation, as described in paragraph (b) of this clause, progress payments for undefinitized contract actions shall be liquidated at 80 percent of the amount invoiced for work performed under the undefinitized contract action as long as the contract action remains undefinitized. The amount of unliquidated progress payments for undefinitized contract actions shall not exceed 80 percent of the maximum liability of the Government under the undefinitized contract action or such lower limit specified elsewhere in the contract. Separate limits may be specified for separate actions.

(l) Due date. The designated payment office will make progress payments on the 30th day after the designated billing office receives a proper progress payment request. In the event that the Government requires an audit or other review of a specific progress payment request to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make a payment by the specified due date. Progress payments are considered contract financing and are not subject to the interest penalty provisions of the Prompt Payment Act.

(m) Progress payments under indefinitized contracts. The Contractor shall account for and submit progress payment requests under individual orders as if the order constituted a separate contract, unless otherwise specified in this contract.

(End of Clause)

I-114            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 promptly, within 10 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

Name of Offeror or Contractor: SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

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 Contractors estimate of the time by which the Government must respond to the Contractors notice to minimize cost, delay or disruption of performance.

(c) Continued performance. Following submission of the notice required by paragraph (b) of this clause, 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 paragraph (b) of this clause, notice shall be given in the manner provided. All directions, communications, interpretations, orders and similar actions of the SAR shall be reduced to writing promptly and copies furnished to the Contractor and to the Contracting Officer. The Contracting Officer shall promptly countermand any action which exceeds the authority of the SAR.

(d) Government response. The Contracting Officer shall promptly, within 10 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 Contractors notice information is inadequate to make a decision under subparagraphs (d)(1), (2), or (3) of this clause, 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 Contractors 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 Contractors failure to provide notice or to continue performance as provided, respectively, in paragraphs (b) and (c) of this clause.

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)

I-115

252.235-7010

ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER

MAY/1995

(a) The Contractor shall include an acknowledgment of the Governments support in the publication of any material based on or developed under this contract, stated in the following terms: This material is based upon work supported by the United States Army under Contract No. W56HZV-13-C-0349.

(b) All material, except scientific articles or papers published in scientific journals, must, in addition to any notices or

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>	<b>Page 53 of 59</b>
	PIIN/SIIN W56HZV-13-C-0349 MOD/AMD	

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

disclaimers by the Contractor, also contain the following disclaimer: Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the United States Army.

(End of clause)

I-116            52.215-19            NOTIFICATION OF OWNERSHIP CHANGES            OCT/1997

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall --

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractors ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

(c) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of Clause)

I-117            52.219-4            NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS            JAN/2011

(a) Definition. See 13 CFR 125.6(e) for definitions of terms used in paragraph (d).

(b) Evaluation preference.

(1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except

(i) Offers from HUBZone small business concerns that have not waived the evaluation preference; and

(ii) Otherwise successful offers from small business concerns.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offerors base offer. These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(4) When the two highest rated offerors are a HUBZone small business concern and a large business, and the evaluated offer of the HUBZone small business concern is equal to the evaluated offer of the large business after considering the price evaluation preference, award will be made to the HUBZone small business concern.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>	<b>Page 54 of 59</b>
	PIIN/SIIN W56HZV-13-C-0349	MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

factor will be added to its offer for evaluation purposes. The agreements in paragraphs (d) and (e) of this clause do not apply if the offeror has waived the evaluation preference.

Offer elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction. (i) At least 15 percent of the cost of contract performance to be incurred for personnel will be spent on the prime contractor's employees;

(ii) At least 50 percent of the cost of the contract performance to be incurred for personnel will be spent on the prime contractor's employees or on a combination of the prime contractor's employees and employees of HUBZone small business concern subcontractors;

(iii) No more than 50 percent of the cost of contract performance to be incurred for personnel will be subcontracted to concerns that are not HUBZone small business concerns; or

(4) Construction by special trade contractors. (i) At least 25 percent of the cost of contract performance to be incurred for personnel will be spent on the prime contractor's employees;

(ii) At least 50 percent of the cost of the contract performance to be incurred for personnel will be spent on the prime contractor's employees or on a combination of the prime contractor's employees and employees of HUBZone small business concern subcontractors;

(iii) No more than 50 percent of the cost of contract performance to be incurred for personnel will be subcontracted to concerns that are not HUBZone small business concerns.

(e) A HUBZone joint venture agrees that the aggregate of the HUBZone small business concerns to the joint venture, not each concern separately, will perform the applicable percentage of work requirements.

(f)(1) When the total value of the contract exceeds \$25,000, a HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business concern manufacturers.

(2) When the total value of the contract is equal to or less than \$25,000, a HUBZone small business concern nonmanufacturer may provide end items manufactured by other than a HUBZone small business concern manufacturer provided the end items are produced or manufactured in the United States.

(3) Paragraphs (f)(1) and (f)(2) of this section do not apply in connection with construction or service contracts.

(g) Notice. The HUBZone small business offeror acknowledges that a prospective HUBZone awardee must be a HUBZone small business concern at the time of award of this contract. The HUBZone offeror shall provide the Contracting Officer a copy of the notice required by 13 CFR 126.501 if material changes occur before contract award that could affect its HUBZone eligibility. If the apparently successful HUBZone offeror is not a HUBZone small business concern at the time of award of this contract, the Contracting Officer will proceed to award to the next otherwise successful HUBZone small business concern or other offeror.

(End of clause)

I-118 52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION

JUL/2013

(a) Definitions. As used in this clause--

"Long-term contract" means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the



<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>	<b>Page 56 of 59</b>
	PIIN/SIIN W56HZV-13-C-0349	MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Governments rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to --

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(End of Clause)

I-120            52.223-11            OZONE-DEPLETING SUBSTANCES            MAY/2001

(a) Definition. Ozone-depleting substance, as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as--

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

Warning

Contains (or manufactured with, if applicable) \* \_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

\* The Contractor shall insert the name of the substance(s).

(End of Clause)

I-121            52.252-2            CLAUSES INCORPORATED BY REFERENCE            FEB/1998

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

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:

<http://www.acq.osd.mil/dpap/dars/far.html> or <http://www.acq.osd.mil/dpap/dars/index.htm> or <http://farsite.hill.af.mil/VFAFARA.HTM>

(End of Clause)

I-122      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 DoD FAR SUPPLEMENT (48 CFR 2) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the name of the regulation.

(End of Clause)

I-123      252.223-7001      HAZARD WARNING LABELS      DEC/1991

(a) Hazardous material, as used in this clause, is defined in the Hazardous Material Identification and Material Safety Data clause of this contract.

(b) The Contractor shall label the item package (unit container) of any hazardous material to be delivered under this contract in accordance with the Hazard Communication Standard (29 CFR 1910.1200 et seq). The Standard requires that the hazard warning label conform to the requirements of the standard unless the material is otherwise subject to the labeling requirements of one of the following statutes:

- (1) Federal Insecticide, Fungicide and Rodenticide Act;
- (2) Federal Food, Drug and Cosmetics Act;
- (3) Consumer Product Safety Act;
- (4) Federal Hazardous Substances Act; or
- (5) Federal Alcohol Administration Act.

(c) The Offeror shall list which hazardous material listed in the Hazardous Material Identification and Material Safety Data clause of this contract will be labeled in accordance with one of the Acts in paragraphs (b)(1) through (5) of this clause instead of the Hazard Communication Standard. Any hazardous material not listed will be interpreted to mean that a label is required in accordance with the Hazard Communication Standard.

MATERIAL (If None, Insert None.)	ACT
NONE	

(d) The apparently successful Offeror agrees to submit, before award, a copy of the hazard warning label for all hazardous materials not listed in paragraph (c) of this clause. The Offeror shall submit the label with the Material Safety Data Sheet being furnished under the Hazardous Material Identification and Material Safety Data clause of this contract.

(e) The Contractor shall also comply with MIL-STD-129, Marking for Shipment and Storage (including revisions adopted during the term of this contract).

(End of clause)

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>	<b>Page 58 of 59</b>
	PIIN/SIIN W56HZV-13-C-0349	MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

I-124            52.204-4009            MANDATORY USE OF CONTRACTOR TO GOVERNMENT ELECTRONIC COMMUNICATION            MAR/2005

(a) All references in the contract to the submission of written documentation shall mean electronic submission. All electronic submissions shall be in the formats and media described in the website:

<http://contracting.tacom.army.mil/acqinfo/ebidnotice.htm>

(b) This shall include all written unclassified communications between the Government and the Contractor except contract awards and contract modifications which shall be posted on the internet. Return receipt shall be used if a commercial application is available. Classified information shall be handled in full accordance with the appropriate security requirements.

(c) In order to be contractually binding, all Government communications requiring a Contracting Officer signature must be sent from the Contracting Officer's e-mail address. The Contractor shall designate the personnel with signature authority who can contractually bind the contractor. All binding contractor communication shall be sent from this contractor e-mail address(es).

(d) Upon award, the Contractor shall provide the Contracting Officer with a list of e-mail addresses for all administrative and technical personnel assigned to this contract.

(e) Unless exempted by the Procuring Contracting Officer in writing, all unclassified written communication after contract award shall be transmitted electronically.

[End of Clause]

I-125            52.219-4070            PILOT MENTOR-PROTEGE PROGRAM            APR/2006

(a) The Pilot Mentor-Protege Program does not apply to small business concerns.

(b) Utilization of the Pilot Mentor-Protege Program (hereafter referred to as the Program) is encouraged. Under the Program, eligible companies approved as mentor firms enter into a mentor-protege agreement with eligible protege firms. The goal of the program is to provide appropriate developmental assistance to enhance the capabilities of the protege firm. The Mentor firm may be eligible for cost reimbursement or credit against their applicable subcontracting goals.

(c) Mentor firms are encouraged to identify and select concerns that are defined as emerging small business concerns, small disadvantaged business, women-owned small business, HUBZone small business, service-disabled veteran-owned small business, veteran-owned small business or an eligible entity employing the severely disabled.

(d) Full details of the program are located at [http://www.acq.osd.mil/sadbu/mentor\\_protege/](http://www.acq.osd.mil/sadbu/mentor_protege/)

or

<http://sellingtoarmy.info/User/ShowPage.aspx?SectionID=12>

(e) For additional questions after reviewing the information provided, contact the Office of Small Business Programs serving your area.

[End of Clause]

The clauses below are incorporated by reference with the same force and effect as if they were given in full text. The full text of a clause may be accessed electronically at the following web address:

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

Regulatory Cite	Title	
252.227-7017	IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS	JAN/2011
252.227-7028	TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT	JUN/1995

\*\*\* END OF NARRATIVE I0001 \*\*\*

**CONTINUATION SHEET****Reference No. of Document Being Continued****Page 59 of 59**

PIIN/SIIN W56HZV-13-C-0349

MOD/AMD

**Name of Offeror or Contractor:** SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

## SECTION J - LIST OF ATTACHMENTS

<u>List of Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number of Pages</u>	<u>Transmitted By</u>
Exhibit A	CONTRACT DATA REQUIREMENTS LIST (DD FORM 1423)	25-APR-2013		
Attachment 0001	CAN ICD TEMPLATE	25-APR-2013	001	ELECTRONIC IMAGE
Attachment 0002	MIL-PRF-GCS600A	28-JUL-2010	021	ELECTRONIC IMAGE
Attachment 0003	ATPD-2404 ENVIRONMENTAL CONDITIONS FOR HBCT TRACKED VEHICLE SYSTEMS	21-OCT-2011	045	ELECTRONIC IMAGE
Attachment 0004	SMALL BUSINESS SUBCONTRACTING PLAN	14-JUN-2013	001	EMAIL
Attachment 0005	SIC PERFORMANCE TESTING INSPECTION & ACCEPTANCE CRITERIA	08-AUG-2013	004	ELECTRONIC IMAGE
Attachment 0006	INDENTIFICATION & ASSERTION OF RESTRICTIONS	21-JUN-2013	002	ELECTRONIC IMAGE

CONTRACT DATA REQUIREMENT LIST

Form Approval OMB No. 0704-0188 Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

- A. CONTRACT LINE ITEM NO.: 0011
- B. EXHIBIT: A
- C. CATEGORY:
- D. SYSTEM/ITEM: 175 kW Silicon Carbide Generator Controller
- E. CONTRACT/PR NO.: W56HZV-13-C-0349
- F. CONTRACTOR: Science Applications International Corporation

- 1. DATA ITEM NO.: A001
- 2. TITLE OF DATA ITEM: Contractors Progress, Status and Management Report
- 3. SUBTITLE: Status Reports
- 4. AUTHORITY: DI-MGMT-80227
- 5. CONTRACT REFERENCE: C.5.1
- 6. REQUIRING OFFICE: AMSRD-TAR-S
- 7. DD250 REQ: LT
- 8. APP CODE:
- 9. DIST. STATEMENT REQUIRED.: B
- 10. FREQUENCY: Bi-Monthly
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB.: SEE BLK 16
- 13. DATE OF SUBS. SUB...: SEE BLK 10
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Progress Reports to:		
Joseph Heuvers, COR,		
Email: joseph.heuvers@us.army.mil	0	1
 Rachel Heaney, Contract Specialist,		
Email: Rachel.r.heaney2.civ@mail.mil	0	1
Administrative Contracting Officer identified in Section G of the contract	0	1
 15. TOTAL:	0	3

16. REMARKS: Contractor shall provide bi-monthly (every 60 days) written progress reports. Bi-Monthly reports shall be submitted in accordance with the timeframe specified in Section C.5.1 of the statement of work.

The bi-monthly reports shall include all information required by the DID stated in block 4 and also include any preliminary test data performed during the reporting period.

- 17. PRICE GROUP:
  - 18. ESTIMATED TOTAL PRICE :
- =====

- 1. DATA ITEM NO. ....: A002
- 2. TITLE OF DATA ITEM: SCIENTIFIC AND TECHNICAL REPORTS Summary
- 3. SUBTITLE: FINAL REPORT
- 4. AUTHORITY: DI-MISC-81612A
- 5. CONTRACT REF: C.5.8
- 6. REQUIRING OFFICE: AMSRD-TAR-S
- 7. DD250 REQ: DD
- 8. APP CODE: 11. AS OF DATE:

- 9. DIST. STATEMENT REQUIRED.: A
- 10. FREQUENCY: SEE BLK 16
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB.: SEE BLK 16
- 13. DATE OF SUBS. SUB.: SEE BLK 16
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Draft and Final Reports to: Joseph Heuvers, COR, Email: joseph.heuvers@us.army.mil	1	1
Rachel Heaney, Contract Specialist, Email: Rachel.r.heaney2.civ@mail.mil	1	1

Administrative Contracting Officer identified in Section G of the contract 1 1

15. TOTAL: 3 3

16. REMARKS: The Final report (including the draft) shall be submitted to the COR in accordance with the timeframe specified in Section C.5.8 of the statement of work.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

=====

- 1. DATA ITEM NO.: A003
- 2. TITLE OF DATA ITEM: Presentation Materials
- 3. SUBTITLE: Briefing
- 4. AUTHORITY (Dt of Acq Document No.): DI-ADMN-813735. CONTRACT REFERENCE: C.4.1, C.4.2, C.4.3, C.4.4, C.4.5, C.5.10
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: LT
- 8. APP CODE:
- 9. DIST. STATEMENT REQUIRED: B
- 10. FREQUENCY: See Block 16
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB: See Block 16
- 13. DATE OF SUBS.SUB: See Block 16
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Agenda to: Joseph Heuvers, COR, Email: joseph.heuvers@us.army.mil	0	1
15. TOTAL:	0	1

16. REMARKS:  
a. Presentation Materials provided for each of the reviews specified in Section C.4 of the statement of work shall include an agenda and a program plan. The program plan shall include the individual tasks, deliverables, major events, and critical milestones. The program plan shall be updated prior to each meeting required in Section C.4 of the statement of work. All documentation shall be in Microsoft Word, Microsoft Power Point, or PDF format.

Presentation materials shall include design analysis summary for the design of the Generator controller up to the point of each review required by Section C.4 of the statement of work.

The agenda shall include the following, where applicable:

- The purpose and objective of the meeting.
- The meeting location, dates and duration.
- A daily chronological listing of each major topic or subtopic to be discussed and the time to be devoted to each topic.
- A list of activities to be represented and identification of their responsibilities.
- Reference to and brief description of the results of previous meetings, when relevant.

- Complete list of all documentation to be available for review.
- Brief description of progress on actions or problems identified at previous meetings, when applicable.
- Other pertinent information such as forms to be used, identification of any deviations or waivers, security classification and clearance requirements.

b. Presentation materials shall be delivered IAW the timeframe as stated in Section C.5.10 of the statement of work.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

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1. DATA ITEM NO.: A004
2. TITLE OF DATA ITEM: Conference Minutes
3. SUBTITLE: Minutes
4. AUTHORITY (Dt of Acq Document No.): DI-ADMN-81250A
5. CONTRACT REFERENCE: C.4.1, C.4.2, C.4.3, C.4.4, & C.4.5 C.5.11
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: LT
8. APP CODE:
9. DIST. STATEMENT REQUIRED: B
10. FREQUENCY: See Block 16
11. AS OF DATE: See Block 16
12. DATE OF FIRST SUB: See Block 16
13. DATE OF SUBS.SUB: See Block 16
14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Minutes to: Joseph Heuvers, COR, Email: joseph.heuvers@us.army.mil	0	1
15. TOTAL:	0	1

16. REMARKS:

a. The contractor shall record all meeting minutes and action items, for the start of work meeting and all review meetings required under this effort. All minutes shall be delivered in accordance with the timeframe specified in C.5.11.

b. Complete the reports in accordance with (IAW) Data Item Description (DID) DI-ADMN-81250A, "Conference Minutes" The COR is responsible for accepting or rejecting the Conference Minutes.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

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1. DATA ITEM NO.: A005
2. TITLE OF DATA ITEM: Performance Specification and Interface Control Document
3. SUBTITLE: ICD
4. AUTHORITY (Dt of Acq Document No.): DI-CMAN-81248A
5. CONTRACT REFERENCE: C.4.5, C.5.3
6. REQUIRING OFFICE: RDTA-RS
7. DD250 REQ: LT
8. APP CODE:
9. DIST. STATEMENT REQUIRED: A
10. FREQUENCY: See Block 16
11. AS OF DATE: See Block 16
12. DATE OF FIRST SUB: See Block 16
13. DATE OF SUBS.SUB: See Block 16
14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail ICD to:		
Joseph Heuvers, COR,		
Email: joseph.heuvers@us.army.mil	1	1

15. TOTAL:	1	1
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16. REMARKS:

- a. The contractor shall provide a Performance Specification and Interface Control Document, which describes the rated performance, physical installation requirements, and operation details of the generator controller, as well as all of the hardware and software interfaces to the controller. The software controller area network (CAN) messages shall be documented in accordance with the CAN message interface control document (ICD) template (Attachment 0001).
- b. Complete the reports IAW DID DI-CMAN-81248A, "Interface Control Document". The COR is responsible for accepting or rejecting the interface control document.
- c. The Performance Specification and Interface Control Document shall be delivered in accordance with the timeframe specified in Section C.5.3 of the Statement of Work.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

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- 1. DATA ITEM NO.: A006
- 2. TITLE OF DATA ITEM: Product Drawings/Models and Associated Lists
- 3. SUBTITLE: Diagrams, schematics, and PRO-E Compatible Models
- 4. AUTHORITY (Dt of Acq Document No.): DI-SESS-81000D
- 5. CONTRACT REFERENCE: C.2.5.4, C.4.2, C.4.3, C.4.4 C.5.4, C.5.5
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: LT
- 8. APP CODE:
- 9. DIST. STATEMENT REQUIRED: A
- 10. FREQUENCY: See Block 16
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB: See Block 16
- 13. DATE OF SUBS.SUB: See Block 16
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Diagrams, schematics, and PRO-E compatible Models to:		
Joseph Heuvers, COR,		
Email: joseph.heuvers@us.army.mil	1	1

15. TOTAL:	1	1
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16. REMARKS:

- a. The contractor shall provide product diagrams and schematics to describe operation of the Generator controller hardware and software developed and delivered under this effort. All functional diagrams and schematics shall be delivered in accordance with the timeframes specified in Section C.5.4 of the statement of work.
- b. The contractor shall provide PRO-E compatible models of the exterior envelope, with connections and mounting points, for the generator controller developed and delivered under this effort. All PRO-E compatible models shall be delivered in accordance with the timeframes specified in Section C.5.5 of the statement of work.
- c. The preliminary Diagrams, Schematics and PRO-E compatible models for the Preliminary Design Review (C.4.2) shall show all major components and configuration of them.
- d. The revised functional diagrams, Schematics and PRO-E compatible models for the Critical Design Review (C.4.3) shall show all components, interconnects, mounting, and be fully detailed to satisfy the performance and engineering requirements of the development

specification.

e. The final functional diagrams, schematics, and PRO-E compatible models for the Final Design Review (C.4.4) shall be 100% complete and manufacture ready. The detail shall be to such a level to allow an engineer skilled in the art to build the item.

f. The as-built final diagrams, schematics, and PRO-E compatible models which include all final updates and revisions to the final functional diagrams, schematics, and PRO-E compatible models no later than 23 months after contract award.

g. Complete the reports in accordance with (IAW) Data Item Description (DID) DI-SESS-81000D, "Product Drawings/Models and Associated Lists." The COR is responsible for accepting or rejecting the drawings, models, and lists.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

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1. DATA ITEM NO.: A007  
 2. TITLE OF DATA ITEM: Computer Software Product  
 3. SUBTITLE: Graphic User Interface Software and User Manual  
 4. AUTHORITY (Dt of Acq Document No.): DI-IPSC-81488  
 5. CONTRACT REFERENCE: C.2.6.3, C.4.5, C.5.6, & C.5.7  
 6. REQUIRING OFFICE: RDTA-RS  
 7. DD250 REQ: LT  
 8. APP CODE:  
 9. DIST. STATEMENT REQUIRED: A  
 10. FREQUENCY: See Block 16  
 11. AS OF DATE: See Block 16  
 12. DATE OF FIRST SUB: See Block 16  
 13. DATE OF SUBS.SUB: See Block 16  
 14. DISTRIBUTION  
 A. ADDRESSEES  
 See Block 16  
 B. COPIES: DRAFT / FINAL  
 1 1  
 15. TOTAL: 1 1

16. REMARKS:

a. The contractor shall provide Graphical User Interface Software and User Manual for the generator controller prior to the delivery of the generator controller. The Graphical User Interface Software and User Manual shall be delivered on CD ROM or DVD to the physical address stated in Section F.1.1. All documentation and user manual files shall be in Microsoft Word or PDF format.

b. The GUI software shall be delivered in accordance with the timeframe specified in Section C.5.6 of the statement of work.

c. The GUI software user manual shall be delivered in accordance with the timeframe specified in Section C.5.7 of the statement of work.

d. Complete the reports IAW DID DI-IPSC-81488, "Computer Software Product." The COR is responsible for accepting or rejecting the Graphical User Interface Software and user manual.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

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1. DATA ITEM NO.: A008  
 2. TITLE OF DATA ITEM: Test Plan  
 3. SUBTITLE:  
 4. AUTHORITY (Dt of Acq Document No.): DI-NDTI-80566A  
 5. CONTRACT REFERENCE: C.3.1, C.5.12  
 6. REQUIRING OFFICE: RDTA-RS  
 7. DD250 REQ: LT  
 8. APP CODE:

- 9. DIST. STATEMENT REQUIRED: A
- 10. FREQUENCY: See Block 16
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB: See Block 16
- 13. DATE OF SUBS.SUB: See Block 16
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Plan to:		
Joseph Heuvers, COR,		
Email: joseph.heuvers@us.army.mil	1	1
15. TOTAL:	1	1

16. REMARKS:

- a. The test plan shall include all preliminary tests the contractor will perform prior to the Test Readiness Review. The Test Plan shall detail all of the preliminary testing required by Attachment 0005 and any additional testing the contractor intends to perform. Any testing that the contractor is requesting to be performed at TARDEC as part of the preliminary testing shall also be detailed in the test plan. The test plan shall detail all of the preliminary checks or tests required to ensure the unit is ready to undergo each specific test requesting to be run at TARDEC.
- b. The test plan shall also separately detail all of the acceptance criteria testing that the Government will perform as stated in Attachment 0005.
- c. All test plans shall be submitted to the COR for review and approval by the COR in accordance with the timeframe specified in Section C.5.12 of the statement of work.
- d. Complete the reports in accordance with (IAW) Data Item Description (DID) DI-NDTI-80566A, "Test Plan." The COR is responsible for accepting or rejecting the test plans.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE:

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- 1. DATA ITEM NO.: A009
- 2. TITLE OF DATA ITEM: Test Data/Report
- 3. SUBTITLE: Preliminary Test Data Report
- 4. AUTHORITY (Dt of Acq Document No.): DI-NDTI-80809B
- 5. CONTRACT REFERENCE: C.3.2, C.4.5, C.5.13
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: LT
- 8. APP CODE:
- 9. DIST. STATEMENT REQUIRED: A
- 10. FREQUENCY: See Block 16
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB: See Block 16
- 13. DATE OF SUBS.SUB: See Block 16
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Plan to:		
Joseph Heuvers, COR,		
Email: joseph.heuvers@us.army.mil	1	1
15. TOTAL:	1	1

16. REMARKS:

- a. Test data report shall include all test data (raw and summarized) and shall be submitted to the COR for review after completed execution of the approved test plan. The preliminary test data report shall be delivered IAW the timeframe stated in C.5.13 of the statement of work.

17. PRICE GROUP:  
 18. ESTIMATED TOTAL PRICE:

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- 1. DATA ITEM NO.: A010
- 2. TITLE OF DATA ITEM: Computer Software Product
- 3. SUBTITLE: Firmware
- 4. AUTHORITY (Dt of Acq Document No.): DI-IPSC-81488
- 5. CONTRACT REFERENCE: C.2.6.3, C.5.2
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: LT
- 8. APP CODE:
- 9. DIST. STATEMENT REQUIRED: A
- 10. FREQUENCY: See Block 16
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB: See Block 16
- 13. DATE OF SUBS.SUB: See Block 16
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
See block 16	0	1
15. TOTAL:	0	1

16. REMARKS:
- a. The contractor shall provide the final version of firmware required for the operation of the generator controller and a method for the end user to load the firmware to the generator controller. The firmware shall be delivered on CD ROM or DVD to the physical address stated in Section F.1.1 in accordance with the timeframe specified in Section C.5.2 of the statement of work.
  - b. Complete the reports IAW DID DI-IPSC-81488, "Computer Software Product." The COR is responsible for accepting or rejecting the firmware.

17. PRICE GROUP:  
 18. ESTIMATED TOTAL PRICE:

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- 1. DATA ITEM NO.: A011
- 2. TITLE OF DATA ITEM: Training Plan
- 3. SUBTITLE:
- 4. AUTHORITY (Dt of Acq Document No.): See block 16
- 5. CONTRACT REFERENCE: C.3.4, C.4.5, & C.5.14
- 6. REQUIRING OFFICE: RDTA-RS
- 7. DD250 REQ: LT
- 8. APP CODE:
- 9. DIST. STATEMENT REQUIRED: A
- 10. FREQUENCY: See Block 16
- 11. AS OF DATE: See Block 16
- 12. DATE OF FIRST SUB: See Block 16
- 13. DATE OF SUBS.SUB: See Block 16
- 14. DISTRIBUTION

A. ADDRESSEES	B. COPIES: DRAFT / FINAL	
E-mail Training Plan to:		
Joseph Heuvers, COR, Email: joseph.heuvers@us.army.mil	1	1
15. TOTAL:	1	1

16. REMARKS:

The offeror shall provide training plan consisting of descriptions of the training content (e.g., subject, topics, tasks) and all training material required to conduct the training class at TARDEC. The training shall cover the physical operation, programming, physical connection, and optimization of the following components (through actual demonstration):

- i. the operation of the Generator controller  
the Generator controller (both in motoring and generating modes)
- ii. Generator controller GUI (demonstrating all GUI functions).
- iii. the software/parameter modifications made to the Generator controller.
- iv. Maintenance and installation/physical interfacing of the generator controller.
- v. Use of the Generator controller with a surrogate load.
- vi. Full power operation

The Training plan shall be submitted to the COR in accordance with the timeframe stated in section C.5.14 of the statement of work.

17. PRICE GROUP:

18. ESTIMATED TOTAL PRICE: