

AWARD/CONTRACT		1 THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING	PAGE OF PAGES 1 5
2 CONTRACT (Proc Inst Ident) NO GS-23F-0011L/HSHQDC-09-F-00043		3 EFFECTIVE DATE See Block 20C	4 REQUISITION/PURCHASE REQUEST/PROJECT NO See Schedule	
5 ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	6 ADMINISTERED BY (If other than Item 5) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528		CODE DHS/OPO/S&T/S&T

7 NAME AND ADDRESS OF CONTRACTOR (No., Street, City, Country, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		8 DELIVERY <input type="checkbox"/> FOB ORIGIN <input checked="" type="checkbox"/> OTHER (See below)
		9 DISCOUNT FOR PROMPT PAYMENT Net 30
10 SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN		ITEM

CODE 0079015980000	FACILITY CODE
11 SHIP TO/MARK FOR Multiple Destinations	12 PAYMENT WILL BE MADE BY Department of Homeland Security Office of Procurement Ops. (S&T) 245 Murray Drive Building 410 Washington DC 20528
CODE	DHS/OPO/S&T

13 AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION <input type="checkbox"/> 10 U.S.C. 2304(c) <input checked="" type="checkbox"/> 41 U.S.C. 253(c)		14 ACCOUNTING AND APPROPRIATION DATA See Schedule			
15A ITEM NO	15B SUPPLIES/SERVICES	15C QUANTITY	15D UNIT	15E UNIT PRICE	15F AMOUNT
Continued					
15G TOTAL AMOUNT OF CONTRACT					\$5,568,743.00

(X)	SEC	DESCRIPTION	PAGE(S)	(X)	SEC	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES			
	A	SOLICITATION/CONTRACT FORM			I	CONTRACT CLAUSES	
	B	SUPPLIES OR SERVICES AND PRICES/COSTS		PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH			
	C	DESCRIPTION/SPECS /WORK STATEMENT			J	LIST OF ATTACHMENTS	
	D	PACKAGING AND MARKING		PART IV - REPRESENTATIONS AND INSTRUCTIONS			
	E	INSPECTION AND ACCEPTANCE			K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	
	F	DELIVERIES OR PERFORMANCE			L	INSTRS, CONDS, AND NOTICES TO OFFERORS	
	G	CONTRACT ADMINISTRATION DATA			M	EVALUATION FACTORS FOR AWARD	
	H	SPECIAL CONTRACT REQUIREMENTS					

17 <input type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)		18 <input checked="" type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number HSHQDC-08-Q-00401 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 condition sheets. The award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.	
19A NAME AND TITLE OF SIGNER (Type or print) Hannah S. Ruhn Contracting Officer		20A NAME OF CONTRACTING OFFICER Kevin Dillon	
19B NAME OF CONTRACTOR	19C DATE SIGNED 3/10/09	20B UNITED STATES OF AMERICA	20C DATE SIGNED 3/10/09
BY <i>Hannah S. Ruhn</i> (Signature of person authorized to sign)		BY <i>Kevin Dillon</i> (Signature of the Contracting Officer)	

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 3
2. AMENDMENT/MODIFICATION NO P00001	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ NO See Schedule	5. PROJECT NO (If applicable)
6. ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	7. ADMINISTERED BY (If other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T
8. NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		(x) 9A. AMENDMENT OF SOLICITATION NO	9B. DATED (SEE ITEM 11)
CODE 0079015980000 FACILITY CODE		(x) 10A. MODIFICATION OF CONTRACT/ORDER NO GS-23F-0011L HSHQDC-09-F-00043	10B. DATED (SEE ITEM 13) 02/12/2009

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
See Schedule Net Increase: \$715,000.00

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE X	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. 43.102(b) 3 - Changes
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF _____
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible).

DUNS Number: 007901598+0000

ALC: 70-08-1513


APS: 70X0800

MODIFICATION

The purpose of this modification is to (1) deobligate funding on CLIN 0006 (2) Update the remaining funds on CLIN 0013 (3) add funding (4) assign a COTR and (5) correct a typo in FAR 52.217-9

(1) CLIN 0006 is partially de-obligated in the amount of \$100,000 in accordance with the accounting information listed on page 2 of this modification. These funds were manually obligated under contract DTFAC-03-C-00042 on 9/11/2008. The subject funding expired at Continued ...

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

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kevin Dillon
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)
15C. DATE SIGNED	16C. DATE SIGNED 4-29-09

NSN 7540-01-152-8070
Previous edition unusable

STANDARD FORM 30 (REV 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
GS-23F-0011L/HSHQDC-09-F-00043/P00001

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NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>the end of FY08.</p> <p>(2) Line item 0013 - Additional Funding for Future Tasks - is hereby reduced from \$2,349,021 to \$1,634,021 based on the funding added under the subject modification.</p> <p>(3) The total funded contract amount is hereby increased from \$5,568,743.00 by \$715,000.00 to \$6,283,743.00.</p> <p>Discount Terms: Net 30</p> <p>FOB: Destination</p> <p>Period of Performance: 03/10/2009 to 03/09/2010</p> <p>Change Item 0006 to read as follows (amount shown is the obligated amount):</p>				
0006	<p>Support to the Check Point Program within the Department of Homeland Security, Science and Technology Directorate. All work shall be accomplished in accordance with the attached Statement of Work (SOW).</p> <p>Product/Service Code: AJ46</p> <p>Requisition No: RSLF-09-00105</p> <p>Accounting Info: NONE000-000-8X-33-02-03-001-01-00-0000-00-00-00-00-00-GE-OE-25-50-000000 Funded: \$0.00</p> <p>Accounting Info: REI8121-000-RA-70-00-00-000-01-00-0000-00-00-00-00-00-GE-OE-25-50-000000 Funded: (b) (4)</p> <p>Period of Performance: 12 Months From Contract Award Date</p> <p>Change Item 0013 to read as follows (amount shown is the obligated amount):</p>				(b) (4)
0013	<p>Additional Funding For Future Tasks (Optional)</p> <p>Amount: \$1,634,021.00 (Option Line Item)</p> <p>Product/Service Code: C118</p> <p>Product/Service Description: RESEARCH & DEVELOPMENT FACILITIES</p> <p>Add Item 0015 as follows:</p>				0.00
0015	<p>Funding for the Air Cargo Systems Integrated Continued ...</p>				(b) (4)

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
GS-23F-0011L/HSHQDC-09-F-00043/P00001

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3 3

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Approach Project. The Statement of Work for this effort was incorporated into the base award. Product/Service Code: AJ46 Requisition No: RSEN-07-00100</p> <p>Accounting Info: NONE000-000-7X-33-02-02-001-01-00-0000-00-00-00-00-00-GE-BA-25-14-000000 Funded: (b) (4)</p> <p>Add Item 0016 as follows:</p>				
0016	<p>Add funding to accomplish Phase 2 of the three phase cargo screener training project. Product/Service Code: aj46 Requisition No: RSTL-09-00008</p> <p>Accounting Info: NONE000-000-9X-33-02-02-001-01-00-0000-00-00-00-00-00-GE-OE-25-37-000000 Funded: (b) (4)</p> <p>Add Item 0017 as follows:</p>				(b) (4)
0017	<p>Explosives Effect Laboratory (EEL) support in accordance with attached Statement of Work Product/Service Code: aj46 Requisition No: RSLF-09-00080</p> <p>Accounting Info: NONE000-000-9X-37-02-05-016-01-00-0000-00-00-00-00-00-GE-OE-25-37-LF0017 Funded: (b) (4)</p> <p>(4) Maria Torres, (b)(2)(b)(6) is hereby designated as the alternate COTR for the subject contract.</p> <p>(5) FAR 52.217-9 Option to Extend the Term of the Contract (Mar 2000), paragraph (c) is corrected to read 15 months in lieu of 53 months.</p>				(b) (4)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1 CONTRACT ID CODE	PAGE OF PAGES 1 2
2 AMENDMENT/MODIFICATION NO. P00002	3 EFFECTIVE DATE 05/27/2009	4 REQUISITION/PURCHASE REQ NO	5 PROJECT NO. (If applicable)
6 ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	7 ADMINISTERED BY (If other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T
8 NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432013693		(x) 9A AMENDMENT OF SOLICITATION NO.	9B DATED (SEE ITEM 11)
CODE 0079015980000	FACILITY CODE	x 10A MODIFICATION OF CONTRACT/ORDER NO. GS-23F-0011L HSHQDC-09-F-00043	10B DATED (SEE ITEM 13) 02/12/2009

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted, or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE X	A THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A 43.102(b) 3 - Changes
	B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b)
	C THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF
	D OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ 0 _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 007901598+0000

ALC: 70-08-1513

APS: 70X0800

MODIFICATION


The purpose of this modification is to (1) add Key Personnel

(1) The purpose of this modification is to add Key Personnel as outlined under Battelle's requested letters dated April 6, 7, 24 and May 22, 2009.

Name	Key Labor Category
(b) (4)	Program Manager
(b) (4)	Program Manager

Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print)		16A NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kevin Dillon	
15B CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C DATE SIGNED	16B UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C DATE SIGNED 5/27/09

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>(b) (4)</p> <p>Senior Engineer Senior Engineer Senior Engineer Engineer III Engineer III Engineer III</p> <p>NOTE: Battelle has 30 days from the date of this modification for each employee under the above listed position to provide the SSE with the following completed documentation:</p> <p>Standard Form (SF85P) One Single Sheet Fingerprint Card (FD 258)</p> <p>All other terms and conditions remain unchanged. Period of Performance: 03/10/2009 to 03/09/2010</p>				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1 CONTRACT ID CODE	PAGE OF PAGES 1 3
2 AMENDMENT/MODIFICATION NO P00003	3 EFFECTIVE DATE 06/30/2009	4 REQUISITION/PURCHASE REQ NO See Schedule	5 PROJECT NO (if applicable)
6 ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	7 ADMINISTERED BY (if other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T
8 NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		(x) 9A AMENDMENT OF SOLICITATION NO	9B DATED (SEE ITEM 11)
CODE 0079015980000	FACILITY CODE	x 10A MODIFICATION OF CONTRACT/ORDER NO GS-23F-0011L HSHQDC-09-F-00043	10B DATED (SEE ITEM 13) 02/12/2009

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment, (b) By acknowledging receipt of this amendment on each copy of the offer submitted, or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12 ACCOUNTING AND APPROPRIATION DATA (if required)
See Schedule
Net Increase: \$849,821.00

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO IN ITEM 10A
	B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b)
X	C THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF 43.103(b) - Bilateral
	D OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not is required to sign this document and return _____ 0 _____ copies to the issuing office

14 DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

DUNS Number: 007901598+0000

ALC: 70-08-1513

APS: 70X0800

MODIFICATION

The purpose of this modification is to (1) Update the remaining funds on CLIN 0013 (2) add funding (3) Key Personnel Approval.

(1) Line item 0013 - Additional Funding for Future Tasks - is hereby reduced from (b) (4) to (b) (4) based on the funding added under the subject modification.

Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print) Hannah S. Nunn Contracting Officer	15B CONTRACTOR/OFFICER <i>Hannah S. Nunn</i> (Signature of person authorized to sign)	15C DATE SIGNED 6/30/09	15A NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kevin Dillon	15B UNITED STATES OF AMERICA <i>Kevin Dillon</i> (Signature of Contracting Officer)	15C DATE SIGNED 6/30/09
----------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	----------------------------	---------------------------------------------------------------------------	-------------------------------------------------------------------------------------------	----------------------------

NSN 7540-01-152-8070
Previous edition unusable

STANDARD FORM 30 (REV 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
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NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>(2) The total funded contract amount is hereby increased from (b)(4) by (b)(4) to (b)(4)</p> <p>Discount Terms: Net 30</p> <p>FOB: Destination</p> <p>Period of Performance: 03/10/2009 to 03/09/2010</p> <p>Change Item 0013 to read as follows (amount shown is the obligated amount):</p>				
0013	<p>Additional Funding For Future Tasks (Optional)</p> <p>Amount: (b)(4) (Option Line Item)</p> <p>Product/Service Code: C118</p> <p>Product/Service Description: RESEARCH & DEVELOPMENT FACILITIES</p>				0.00
	<p>Add Item 0018 as follows:</p>				
0018	<p>To provide supplemental funding (b)(4) to an existing contract with Battelle to support the DHS S&T IGD Rail Car and Stationary Storage Tank Toxic Inhalation Hazard (TIH) release mitigation project.</p> <p>Labor - (b)(4)</p> <p>Travel - (b)(4)</p> <p>Material - (b)(4)</p> <p>Requisition No (b)(4)</p> <p>Accounting Info: NONE000-000-9X-35-01-05-003-01-00-0000-00-00-00-00-00-GE-OE-25-50-000000 Funded: (b)(4)</p>				(b)(4)
	<p>Add Item 0019 as follows:</p>				
0019	<p>Funding support the DHS S&T Advanced Display Project in accordance with the Statement of Work (provided under separate cover).</p> <p>Labor - (b)(4)</p> <p>Travel - (b)(4)</p> <p>Material - (b)(4)</p> <p>Requisition No (b)(4)</p> <p>Accounting Info: NONE000-000-8X-33-02-01-002-01-00-0000-00-00-00-00-00-GE-OE-25-50-000000 Funded: (b)(4)</p>				(b)(4)
	<p>Add Item 0020 as follows: Continued ...</p>				

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
 GS-23F-0011L/HSHQDC-09-F-00043/P00003

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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)						
0020	<p>Funding support the DHS S&T CEIA Cargo Metal Detector Assessment in accordance with the Statement of Work (provided under separate cover). Labor - (b) (4) Travel - (b) (4) Material - (b) (4) Requisition No: (b) (4)</p> <p>Accounting Info: NONE000-000-9X-33-02-02-002-01-00-0000-00-00-00-00-00-GE-OE-25-37-000000 Funded: \$0.00</p> <p>Accounting Info: NONE000-000-9X-33-02-02-001-01-00-0000-00-00-00-00-00-GE-OE-25-37-000000 Funded: (b) (4)</p> <p>(3) The following Key Personnel are hereby approved under the subject Task Order.</p> <table border="0"> <tr> <td>Name</td> <td>Key Labor Category</td> </tr> <tr> <td>(b) (4)</td> <td>Senior Engineer</td> </tr> <tr> <td>(b) (4)</td> <td>Senior Human Factors Engineer</td> </tr> </table> <p>NOTE: Battelle has 30 days from the date of this modification for each employee under the above listed position to provide the SSE with the following completed documentation:</p> <p>Standard Form (SF85P) One Single Sheet Fingerprint Card (FD 258)</p>	Name	Key Labor Category	(b) (4)	Senior Engineer	(b) (4)	Senior Human Factors Engineer				(b) (4)
Name	Key Labor Category										
(b) (4)	Senior Engineer										
(b) (4)	Senior Human Factors Engineer										

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1 CONTRACT ID CODE	PAGE OF PAGES
			1 2
2 AMENDMENT/MODIFICATION NO	3 EFFECTIVE DATE	4 REQUISITION/PURCHASE REQ NO	5 PROJECT NO (If applicable)
P00004	07/22/2009	RSLF-09-00164	
6 ISSUED BY	CODE	7 ADMINISTERED BY (If other than Item 6)	CODE
U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	DHS/OPO/S&T/S&T	U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	DHS/OPO/S&T/S&T
8 NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code)		(x) 9A AMENDMENT OF SOLICITATION NO	
BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		9B DATED (SEE ITEM 11)	
		x 10A MODIFICATION OF CONTRACT/ORDER NO	
		GS-23F-0011L	
		HSHQDC-09-F-00043	
		10B DATED (SEE ITEM 13)	
CODE	FACILITY CODE		
0079015980000		02/12/2009	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment, (b) By acknowledging receipt of this amendment on each copy of the offer submitted, or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12 ACCOUNTING AND APPROPRIATION DATA (If required) Net Decrease: -\$265,000.00
NONE000-000-9X-37-02-05-016-01-00-0000-00-00-00-00-GE-OE-25-37-LF0017

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A
X	43.102 (b) 3 - Changes
	B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b)
	C THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF
	D OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return 0 copies to the issuing office

14 DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

DUNS Number: 007901598+0000

MODIFICATION

The purpose of this modification is to (1) Update the remaining funds on CLIN 0013 (2) de-obligate CLIN 0017 (3) Key Personnel Approval.

Discount Terms:

Net 30

FOB: Destination

Period of Performance: 03/10/2009 to 03/09/2010

Change Item 0013 to read as follows (amount shown is the obligated amount):

Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print)	16A NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
Hannah S. Nunn Contracting Officer	Kevin Dillon
15B CONTRACTOR/OFFEROR	15C DATE SIGNED
<i>Hannah S. Nunn</i> (Signature of person authorized to sign)	7/28/09
16B UNITED STATES OF AMERICA	16C DATE SIGNED
<i>Kevin Dillon</i> (Signature of Contracting Officer)	7/28/09

CONTINUATION SHEET

REFERENCE NO OF DOCUMENT BEING CONTINUED
 GS-23F-0011L/HSHQDC-09-F-00043/P00004

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 2 2

NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0013	Additional Funding For Future Tasks (Optional) Amount: (b) (4) (Option Line Item) Product/Service Code: C118 Product/Service Description: RESEARCH & DEVELOPMENT FACILITIES Change Item 0017 to read as follows (amount shown is the obligated amount):				0.00
0017	Deletion of CLIN 0017 - Explosives Effect Laboratory (EEL) support (3) The following Key Personnel are hereby approved under the subject Task Order. Name Key Labor Category (b) (4) Engineer III Engineer III NOTE: Battelle has 30 days from the date of this modification for each employee under the above listed position to provide the SSE with the following completed documentation: Standard Form (SF85P) One Single Sheet Fingerprint Card (FD 258)				-265,000.00

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1 CONTRACT ID CODE	PAGE OF PAGES
			1 2
2 AMENDMENT/MODIFICATION NO P00005	3 EFFECTIVE DATE 08/05/2009	4 REQUISITION/PURCHASE REQ NO RSTL-09-00037	5 PROJECT NO (If applicable)
6 ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	7 ADMINISTERED BY (If other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T
8 NAME AND ADDRESS OF CONTRACTOR (No. street county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 432012693		(x) 9A AMENDMENT OF SOLICITATION NO	9B DATED (SEE ITEM 11)
CODE 0079015980000 FACILITY CODE		X 10A MODIFICATION OF CONTRACT/ORDER NO GS-23F-0011L HSHQDC-09-F-00043	10B DATED (SEE ITEM 13) 02/12/2009

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment. (b) By acknowledging receipt of this amendment on each copy of the offer submitted, or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12 ACCOUNTING AND APPROPRIATION DATA (If required) Net Increase: \$500,000.00
NONE000-000-9X-33-02-02-002-01-00-0000-00-00-00-00-GE-OE-25-50-000000

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE X	A THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A 43.102(b) 3 - Changes
	B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D OTHER (Specify type of modification and authority):

E. IMPORTANT: Contractor is not. is required to sign this document and return _____ copies to the issuing office.

14 DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 007901598+0000

MODIFICATION

The purpose of this modification is to (1) Update the remaining funds on CLIN 0013 (2) Add CLIN 0021.

Delivery: 365 Days After Award

Discount Terms:

Net 30

Delivery Location Code: DHS

Department of Homeland Security

245 Murray Lane

Bldg. 410

Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print)	16A NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kevin Dillon
15B CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C DATE SIGNED
16B UNITED STATES OF AMERICA Kevin Dillon (Signature of Contracting Officer)	16C DATE SIGNED 8-6-09

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
 GS-23F-0011L/HSHQDC-09-F-00043/P00005

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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Washington DC 20528 FOB: Destination Period of Performance: 03/10/2009 to 03/09/2010 Change Item 0013 to read as follows (amount shown is the obligated amount):				
0013	Additional Funding For Future Tasks (Optional) Amount: (b) (4) (Option Line Item) Product/Service Code: C118 Product/Service Description: RESEARCH & DEVELOPMENT FACILITIES				0.00
	Add Item 0021 as follows:				
0021	Battelle shall provide support to the Explosives Detection Program within the Department of Homeland Security, Science and Technology Directorate. All work shall be accomplished in accordance with the attached Statement of Work (SOW).				500,000.00

2 AMENDMENT/MODIFICATION NO P00006 3 EFFECTIVE DATE 09/23/2009 4 REQUISITION/PURCHASE REQ NO RSIN-09-00058 5 PROJECT NO (If applicable)

6 ISSUED BY CODE DHS/OPO/S&T/S&T 7 ADMINISTERED BY (If other than Item 6) CODE DHS/OPO/S&T/S&T
 U.S. Dept. of Homeland Security
 Office of Procurement Operations
 S&T Acquisition Branch
 245 Murray Lane, SW
 Building 410
 Washington DC 20528

8 NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code)
 BATTELLE MEMORIAL INSTITUTE
 505 KING AVE
 COLUMBUS OH 432012693

(x) 9A AMENDMENT OF SOLICITATION NO
 9B DATED (SEE ITEM 11)
 x 10A MODIFICATION OF CONTRACT/ORDER NO GS-23F-0011L HSHQDC-09-F-00043
 10B DATED (SEE ITEM 13) 02/12/2009

CODE 007901598000 FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment, (b) By acknowledging receipt of this amendment on each copy of the offer submitted, or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12 ACCOUNTING AND APPROPRIATION DATA (If required) Net Increase: \$129,540.00
 See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A
 B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b)
 C THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF FAR 43.103 (a) (3)
 D OTHER (Specify type of modification and authority)

E IMPORTANT: Contractor is not, is required to sign this document and return 1 copies to the issuing office

14 DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

DUNS Number: 007901598+0000
 MODIFICATION
 The purpose of this Modification P00006 is to add funding in the amount of \$129,540 under CLIN 0022. CLIN 0013 is reduced from (b) (4). Funding is increased from (b) (4) by (b) (4).
 Delivery: 365 Days After Award
 Discount Terms: Net 30
 Delivery Location Code: DHS
 Department of Homeland Security
 Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print) Timothy L. Feener Contracting Officer	16A NAME AND TITLE OF CONTRACTING OFFICER (Type or print) SUSAN D. EICHER
15B CONTRACTOR/OFFEROR Signature of person authorized to sign	16B UNITED STATES OF AMERICA Signature of Contracting Officer
15C DATE SIGNED 9/23/09	16C DATE SIGNED 9.23.09

NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	245 Murray Lane Bldg. 410 Washington DC 20528 FOB: Destination Period of Performance: 03/10/2009 to 03/09/2010 Change Item 0013 to read as follows (amount shown is the obligated amount):				
0013	Additional Funding For Future Tasks (Optional) Amount: (b) (4) (Option Line Item) Product/Service Code: C118 Product/Service Description: RESEARCH & DEVELOPMENT FACILITIES Add Item 0022 as follows:				0.00
0022	Battelle Memorial Institute shall provide support to the Homeland Innovative Prototypical Solutions (HIPS) Program within the Department of Homeland Security, Science and Technology Directorate. All work shall be accomplished in accordance with the Statement of Work (SOW). Accounting Info: NONE000-000-9X-36-02-01-007-01-00-0000-00-00-00-00-00-GE-OE-25-50-000000 Funded: (b) (4) Accounting Info: NONE000-000-7X-36-02-01-007-01-00-0000-00-00-00-00-00-GE-OE-25-50-000000 Funded: (b) (4)				(b) (4)

2 AMENDMENT/MODIFICATION NO FC0007		3 EFFECTIVE DATE 10/28/2009		4 REQUISITION/PURCHASE REQ NO KSTL-10-00001		5 PROJECT NO (if applicable)	
6 ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528		CODE DHS/OPO/S&T/S&T		7 ADMINISTERED BY (if other than item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528		CODE DHS/OPO/S&T/S&T	
8 NAME AND ADDRESS OF CONTRACTOR (No street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE 505 KING AVE COLUMBUS OH 43202693				9A AMENDMENT OF SOLICITATION NO			
				9B DATED (SEE ITEM 11)			
				X 10A. MODIFICATION OF CONTRACT/ORDER NO OS-23F-0311L HSHQDC-09-F-00043			
				10B DATED (SEE ITEM 11) 07/12/2009			
CODE G079015980000		FACILITY CODE					

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of offers is extended is not extended . Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items B and 15 and returning _____ copies of the amendment, (b) By acknowledging receipt of this amendment on each copy of the offer submitted, or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12 ACCOUNTING AND APPROPRIATION DATA (if required)
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority): THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation code, etc.) SET FORTH IN ITEM 14 PURSUANT TO THE AUTHORITY OF FAR 43.503(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF FAR 43.103(a)(3).
	D. OTHER (Specify type of modification and authority):

E. IMPORTANT Contractor is not is required to sign this document and return _____ copies to the issuing office

14 DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UICF section headings, including task order/contract subject matter where feasible)
DUNS Number: G079015980000

MODIFICATION
The purpose of this modification is to (1) Issue Key Personnel Approval and (2) Add Labor Categories.
Period of Performance: 03/10/2009 to 03/09/2010
1. The following Key Personnel are hereby approved under the subject Task Order.
Name Key Labor Category
(b) (4) Program Manager
Physicist
Engineer III

Continued ...

Except as provided herein, all terms, conditions and conditions of the document referenced in item 8A or 10A are heretofore changed, remains unchanged and in full force and effect.

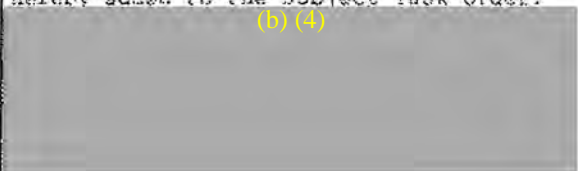
15 NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Contracting Officer William E. Jones		15A NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kevin Dillon	
15B CONTRACTOR/OFFEROR Signature of person authorized to sign William E. Jones		15C DATE SIGNED 10/29/09	
15D UNITED STATES OF AMERICA Signature of Contracting Officer Kevin Dillon		15E DATE SIGNED 10/28/09	

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
 GS-23P-00111/HSHQDC-09-F-00043/P00007

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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>NOTE: Battelle has 30 days from the date of this modification for each employee under the above listed position to provide the SSE with the following completed documentation:</p> <p>Standard Form (SF85P) One Single Sheet Fingerprint Card (FD 258)</p> <p>-----</p> <p>In accordance with Clause 17.2 - Terms and Conditions, the following Labor Categories are hereby added to the subject Task Order:</p> <p>(b) (4)</p> 				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1 CONTRACT ID CODE	PAGE OF PAGES
			1 2
2 AMENDMENT/MODIFICATION NO. P00008	3 EFFECTIVE DATE 01/05/2010	4 REQUISITION/PURCHASE REQ NO RSTL-10-00003	5 PROJECT NO. (If applicable)
6 ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	7 ADMINISTERED BY (If other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T
8 NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE ATTN (b) (6) 505 KING AVE COLUMBUS OH 432012693		(x) 9A AMENDMENT OF SOLICITATION NO.	9B DATED (SEE ITEM 11)
CODE 0079015980000	FACILITY CODE	x 10A MODIFICATION OF CONTRACT/ORDER NO. GS-23F-0011L HSHQDC-09-F-00043	10B DATED (SEE ITEM 13) 02/12/2009

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12 ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b)
x	C THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF FAR 43.103(a) (3)
	D OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not. is required to sign this document and return _____ copies to the issuing office

14 DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

DONS Number: 007901598+0000

ALC: 70-08-1513

APPS: 70X0800

The purpose of this MODIFICATION to contract # HSHQDC-09-F-00043 is to approve key labor personnel.

(i) The following Key Personnel are hereby approved under the subject Task Order.

Name	Key Labor Category
(b) (4)	Physicist
	Senior Engineer

Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print)	16A NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
	Kevin Dillon
15B CONTRACTOR/OFFEROR	15C DATE SIGNED
(Signature of person authorized to sign)	
16B UNITED STATES OF AMERICA	16C DATE SIGNED
(Signature of Contracting Officer)	1-5-10

NSN 7540-01-152-8070
Previous edition unusable

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
 GS-23F-0011L/HSHQDC-09-F-00043/P00008

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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>NOTE: Battelle has 30 days from the date of this modification for each employee under the above listed position to provide the SSE with the following completed documentation: Standard Form (SF85P) One Single Sheet Fingerprint Card (FD 258)</p> <p>There is no additional cost or change to the Period of Performance tied to this change.</p> <p>All other terms and conditions remain in full force and effect. LIST OF CHANGES: New Invoice Address: DHS ICE Burlington Finance Center PO BOX 1000 Attn: S&T Explosives Division SAT.Invoice.Consolidation@dhs.gov Williston VT 05495-1000</p> <p>Period of Performance: 03/10/2009 to 03/09/2010</p>				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1 CONTRACT ID CODE	PAGE OF PAGES
			1 2
2 AMENDMENT/MODIFICATION NO	3 EFFECTIVE DATE	4 REQUISITION/PURCHASE REQ NO	5 PROJECT NO (if applicable)
P00009	03/09/2010	RSLE-10-00080	
6 ISSUED BY	CODE	7 ADMINISTERED BY (if other than Item 6)	CODE
U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	DHS/OPO/S&T/S&T	U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	DHS/OPO/S&T/S&T
8 NAME AND ADDRESS OF CONTRACTOR (No. , street, county, State and ZIP Code)		(x) 9A AMENDMENT OF SOLICITATION NO	
BATTELLE MEMORIAL INSTITUTE ATTN (b) (5) 505 KING AVE COLUMBUS OH 432012693		9B DATED (SEE ITEM 11)	
		x 10A MODIFICATION OF CONTRACT/ORDER NO GS-23F-0011L HSHQDC-09-F-00043	
		10B DATED (SEE ITEM 13) 02/12/2009	
CODE 0079015980000	FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENOMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12 ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO., AS DESCRIBED IN ITEM 14.

CHECK ONE	A THIS CHANGE ORDER IS ISSUED PURSUANT TO (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A
	B THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14 PURSUANT TO THE AUTHORITY OF FAR 43.103(b)
X	C THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF FAR 52.217-9
	D OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not is required to sign this document and return 1 copies to the issuing office

14 DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

DUNS Number: 007901598+0000

ALC: 70-08-1513

The purpose of this MODIFICATION to task order #HSHQDC-09-F-00043 is to (1) exercise the 3 month Option Period for the Base year which extends the Period of Performance end date to 06/09/2010 and (2) increase the value of the task order by the value of the option CLIN (CLIN 0014).

1) The 3-Month Option Period (CLIN 0014) is hereby exercised. The period of performance is extended from 9 March 2010 through 9 June 2010.

Continued ...

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

15A NAME AND TITLE OF SIGNER (Type or print) Timothy L. Feese Contracting Officer	16A NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kevin Dillon
15B CONTRACTOR/OFFEROR Timothy L. Feese (Signature of person authorized to sign)	15C DATE SIGNED 9 MAR 2010
16B UNITED STATES OF AMERICA Kevin Dillon (Signature of Contracting Officer)	16C DATE SIGNED 3/9/10

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
 GS-23F-0011L/HSHQDC-09-F-00043/P00009

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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>2) The value of the task order is increased by the value of the option CLIN (CLIN 0014) from (b) (4).</p> <p>It is estimated that approximately (b) (4) of obligated funds are remaining from the base year effort. Therefore, no additional funds are being obligated to exercise this 3 month option. Current obligated funds are sufficient for continued performance of existing tasks through 9 June 2010.</p> <p>All other terms and conditions remain unchanged. Period of Performance: 03/10/2009 to 06/09/2010</p>				

2. AMENDMENT/MODIFICATION NO. P00010	3. EFFECTIVE DATE 05/03/2010	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable) 1 2
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6. ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	7. ADMINISTERED BY (If other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T
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8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE ATTN (b)(6) 505 KING AVE COLUMBUS OH 432012693	(x) 9A. AMENDMENT OF SOLICITATION NO.	9B. DATED (SEE ITEM 11)
CODE 0079015980000 FACILITY CODE	x 10A. MODIFICATION OF CONTRACT/ORDER NO. GS-23F-0011L HSHQDC-09-F-00043	10B. DATED (SEE ITEM 13) 02/12/2009

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)
DUNS Number: 007901598+0000
ALC: 70-08-1513
APPS: 70X0800


The purpose of this MODIFICATION to contract # HSHQDC-09-F-00043 is to approve key labor personnel.

(1) The following Key Personnel are hereby approved under the subject Task Order.

Name	Key Labor Category
(b)(4)	Engineer III
	Senior Research Chemist

Continued ...

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

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kevin Dillon
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)
15C. DATE SIGNED	16C. DATE SIGNED 5-3-10

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>NOTE: Battelle has 30 days from the date of this modification for each employee under the above listed position to provide the SSE with the following completed documentation: Standard Form (SF85P) One Single Sheet Fingerprint Card (FD 258)</p> <p>All other terms and conditions remain unchanged. Period of Performance: 03/10/2009 to 06/09/2010</p>				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 5
2. AMENDMENT/MODIFICATION NO. P00011	3. EFFECTIVE DATE 06/09/2010	4. REQUISITION/PURCHASE REQ. NO. See Schedule	5. PROJECT NO. (If applicable)
6. ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T	7. ADMINISTERED BY (If other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Branch 245 Murray Lane, SW Building 410 Washington DC 20528	CODE DHS/OPO/S&T/S&T
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) BATTELLE MEMORIAL INSTITUTE ATTN (b) (6) 505 KING AVE COLUMBUS OH 432012693		(x) 9A. AMENDMENT OF SOLICITATION NO.	
CODE 0079015980000 FACILITY CODE		x 10A. MODIFICATION OF CONTRACT/ORDER NO. GS-23F-0011L HSHQDC-09-F-00043	9B. DATED (SEE ITEM 11)
		10B. DATED (SEE ITEM 13) 02/12/2009	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended.
 Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) Net Increase: \$2,657,300.00
 See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Parties
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 007901598+0000
 ALC: 70-08-1513/APPS: 70040800

The purpose of this modification is to establish a bridge that will extend the Period of Performance from 6/9/2010 to 5/30/2011 and increase the "not-to-exceed" ceiling by (b) (4). This modification will also provide funding in the amount of (b) (4) for work identified for 7 tasks in the attached Statements of Work.

The Total value of the subject Task Order is increased from (b) (4) by (b) (4) to (b) (4).

Continued ...

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

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

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
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NAME OF OFFEROR OR CONTRACTOR
 BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0024	Amount: (b) (4) Accounting Info: NONE000-000-04-37-02-05-015-01-00-0000-00-00-00-00 -GE-OE-25-37-LF0016 Funded: (b) (4) Add Item 0024 as follows: Explosive Effects Laboratory Support in accordance with the attached Statement of Work entitled "Explosive Effects Laboratory (EEL) Support" - Bridge Task 3 Requisition No: RSLF-10-00083 Delivery Location Code: TSL Department of Homeland Security William J. Hughes Technical Center TSL Building 315 Atlantic City International Airport Atlantic City NJ 08405 US Amount: (b) (4) Accounting Info: NONE000-000-04-37-02-05-016-01-00-0000-00-00-00-00 -GE-OE-25-37-LF0017 Funded: (b) (4)				(b) (4)
0025	Add Item 0025 as follows: Rail Car Mitigation Project in accordance with the attached Statement of Work entitled "Rail Car TIH Mitigation Project TIH Mitigation Technology Cost Benefit Analysis Tool Development" - - Bridge Task 4 Requisition No: RSIG-10-00066 Delivery Location Code: DHS Department of Homeland Security 245 Murray Lane Bldg. 410 Washington DC 20528 Amount: (b) (4) Accounting Info: NONE000-000-02-35-01-05-003-01-00-0000-00-00-00-00 -GE-OE-25-50-000000 Funded: (b) (4)				(b) (4)
0026	Add Item 0026 as follows: Battelle Regional Jet Vulnerability Assessment Program in accordance with the attached Statement Continued ...				(b) (4)

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
GS-23F-0011L/HSHQDC-09-F-00043/P00011

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NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	of Work entitled "Regional Jet (RJ) Vulnerability Assessment" - Bridge Task 5 Requisition No: RSLF-10-00112 Delivery Location Code: DHS Department of Homeland Security 245 Murray Lane Bldg. 410 Washington DC 20528 Amount: (b) (4) Accounting Info: REI9189-000-RM-70-00-00-000-01-00-0000-00-00-00-00 -GE-OE-25-37-LF0021 Funded: (b) (4) Add Item 0027 as follows:				
0027	Cargo Characterization Project in accordance with the attached Statement of Work entitled "Cargo Characterization Project"- Bridge Task 6 Requisition No: RSTL-10-00017 Delivery Location Code: DHS Department of Homeland Security 245 Murray Lane Bldg. 410 Washington DC 20528 Amount: (b) (4) Accounting Info: NONE000-000-02-33-02-02-001-01-00-0000-00-00-00-00 -GE-OE-25-37-000000 Funded: (b) (4) Add Item 0028 as follows:				(b) (4)
0028	Acoustic-Based Technology Investigation Project in accordance with the attached Statement of Work entitled "Acoustic-Based Technology Investigation Project"- Bridge Task 7 Requisition No: RSEN-10-00091 Delivery Location Code: DHS Department of Homeland Security 245 Murray Lane Bldg. 410 Washington DC 20528 Amount: (b) (4) Accounting Info: NONE000-000-02-33-02-02-001-01-00-0000-00-00-00-00 -GE-OE-25-50-000000 Continued ...				(b) (4)

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
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NAME OF OFFEROR OR CONTRACTOR
BATTELLE MEMORIAL INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)						
	<p>Funded: (b) (4)</p> <p>Note: The pricing established in the subject modification for the period of performance date September 1, 2010 through May 30, 2011 is based on provisional rates based on a (b) (4) increase to the current pricing in the task order. Once the GSA pricing for the above period of performance is negotiated, the labor rates will be adjusted if necessary, as determined by the Contracting Officer. Pricing shall be based on a (b) discount off of the negotiated GSA labor rates.</p> <p>The remaining tasks to be added to the bridge are as follows:</p> <p>Air Cargo Image Density & Complexity Assessment Tool - Bridge Task #TBD HME Certification Readiness Test Revised Approach - Bridge Task #TBD Developmental Test of Checkpoint Systems - Bridge Task #TBD High Speed Computing Capabilities for EEL - Bridge Task #TBD Micro-CT Data Collection - Bridge Task #TBD Home Made Explosives Simulant Development - Bridge Task #TBD Full Threat Weight Data Collection - Bridge Task #TBD</p> <p>*****</p> <p>The following Key Personnel are hereby approved under the subject Task Order.</p> <table border="0"> <tr> <td>Name</td> <td>Key Labor Category</td> <td>Employer</td> </tr> <tr> <td>(b) (4)</td> <td>Program Manager</td> <td>(b) (4)</td> </tr> </table> <p>NOTE: Battelle has 30 days from the date of this modification for each employee under the above listed position to provide the SSE with the following completed documentation:</p> <p>Standard Form (SF85P) One Single Sheet Fingerprint Card (FD 258)</p>	Name	Key Labor Category	Employer	(b) (4)	Program Manager	(b) (4)				
Name	Key Labor Category	Employer									
(b) (4)	Program Manager	(b) (4)									

TASK ORDER TERMS AND CONDITIONS

1. Task Order Type

1.1 This task order is awarded as a Labor Hour contract.

1.2 The Contractor shall efficiently manage the total estimated labor hours and total costs authorized under the task order's Price Schedule, which collectively, represent a **Not-To-Exceed Ceiling Amount** based on projected hourly usage. The labor rates contained in the Price Schedule are fully burdened (loaded) fixed hourly rates that include wages, overhead, general and administrative expenses, and profit for each category of labor identified. These rates shall be consistent with those contained in the Contractor's previously competed General Services Administration (GSA) contract notwithstanding any reduction based on discounts offered the Government under this order.

1.3 Pursuant to Sub-paragraph (c), Federal Acquisition Regulation (FAR) clause 52.232-7, Payments under Time-and-Materials and Labor-Hour Contracts (Dec 2002), if at any time the Contractor has reason to believe that the hourly rate payments and material costs that will accrue in performing this contract in the next succeeding 30 days, if added to all other payments and costs previously accrued, will exceed 85 percent of the ceiling price in the Schedule, the Contractor shall notify the Contracting Officer giving a revised estimate of the total price to the Government for performing this contract with supporting reasons and documentation.

2. Period of Performance

2.1 The period of performance for the proposed task order will be one (1) twelve-month base period and one (1) three (3) month option periods as follows:

Base Period	12 Months from Date of Award
Option Period 1	3 Months from the end of the Base Period

3. Place of Performance

3.1 The place of performance will be at the Contractor's facilities, at the Department of Homeland Security (DHS) Science & Technology Directorate (S&T) Transportation Security Laboratory (TSL) located at the William J. Hughes Technical Center, Atlantic City, New Jersey. Some work may be required at vendor (systems vendors to the Government) facilities or other locations.

4. Government Furnished Information (GFI), Equipment (GFE) and Property (GFP)

4.1 DHS-Furnished Information: The Government will provide certain DHS information, materials, and forms unique to DHS to the Contractor to facilitate the support of the work effort.

4.2 DHS-Furnished Facilities, Supplies, Services and Property: The Government will provide the contractor with facilities, test plans, test bags, additional test articles, explosives and concealments, test database, and relevant documents/reports, such as those related to historical

threat data, industry statistics, and program area operations (cargo/checked bag) to the extent these data/reports are available and reside with the TSL.

4.3 It is not foreseen that other DHS property will be provided to the Contractor. In the event that other property is provided to the Contractor to facilitate the performance of this work effort, DHS will maintain property records.

4.4 The Contractor may be requested to purchase some items in support of this work effort. Before purchasing any individual item equal to or exceeding \$500.00 that is required to support technical tasks performed pursuant to this SOW, the contractor shall obtain the DHS S&T Technical Representative's prior written consent. The DHS S&T Technical Representative may lower or raise the aforementioned \$500.00 threshold at his/her discretion and on written notice to the contractor. If the DHS S&T Technical Representative consents to such purchase, such item will become the property of DHS. The contractor shall maintain any such items according to currently existing property accountability procedures. The DHS S&T Technical Representative will determine the final disposition of any such items. No purchases over \$500.00 are anticipated.

5. Language Requirement

5.1 Contractor personnel shall have sufficient English language proficiency to perform technical services.

6. Travel

6.1 All travel performed and all travel costs claimed shall be in accordance with the Government's Federal Travel Regulation (FTR) and the task order. The Government shall approve travel in advance and supporting documentation shall be provided for costs claimed. Allowable and substantiated travel costs will be reimbursed.

6.2 In accordance with the FTR, local travel costs authorized include, but are not limited to, the following: transportation costs to reach destination, such as cab fare or mileage and parking fees.

6.3 In accordance with the FTR, business travel costs (non-local) authorized include, but are not limited to, the following: airfare; lodging; meals and incidental expenses ("M&IE"); car rental (includes refueling) and ground transportation to and from airport. Transportation to and from airport via personal vehicle includes associated mileage and parking fees. Unless approved in advance, lodging and M&IE shall not exceed GSA Per Diem rates.

6.4 In accordance with the FTR, receipts shall be provided for each incidental expense incurred, which exceeds \$75.00. Incidental expenses apply to both local and business travel, though likelier to occur while on business travel. (Example of an incidental expense on business travel would be cab fare incurred to and from airport.) Lodging and transportation expenses incurred to reach business destination are not considered incidental expenses. If it is impracticable to furnish said receipts in any instance as required by the FTR, the failure to do so must be fully explained. Mere inconvenience in the matter of taking receipts will not be considered.

7. Work Hours

7.1 Total work hours in a month are defined as hours expended by the Contractor in performing work under the task order. The Contractor shall not bill the Government for sick leave, vacation, holidays, jury duty, military leave or any other type of administrative leave.

7.2 When the Government requires and approves the Contractor to work additional hours in a month, including Saturdays, Sundays and Federal holidays, the Contractor shall be paid in accordance with the GSA labor rates to include any discounts contained in the Price Schedule. The Government will not pay a premium on labor rates for additional hours worked.

7.3 Unless otherwise required and approved by the Government, the Contractor shall follow Government procedures for any unscheduled shutdown of Government facilities outside of or during normal business hours in cases warranted by weather conditions, security issues, or other Government-identified emergency health and safety evacuation.

8. Contract Administration

8.1 The Contracting Officer is the only person authorized to approve changes to any of the terms and conditions of this contract. In the event the Contractor effects any changes at the direction of any person other than the Contracting Officer, the changes will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in costs incurred as a result thereof. The Contracting Officer shall be the only individual authorized to accept nonconforming work, waive any requirement of the contract, or to modify any term or condition of the contract. The Contracting Officer is the only individual who can legally obligate Government funds. No cost chargeable to the proposed contract can be incurred before receipt of a fully executed contract, which includes any subsequent contract modifications or other specific written authorization from the Contracting Officer.

Contracting Officer Information

Kevin C. Dillon
Department of Homeland Security
Office of Procurement Operations
Transportation Security Laboratories
Building 315
Atlantic City International Airport
Atlantic City, NJ 08405
Office: (b)(2) (b)(6)
Fax: (b)(2) (b)(6)

8.2 Invoice Submission. The Contractor shall submit an original invoice electronically, including any required back-up documentation within ten (10) days of completion of monthly services to the Contracting Officer Technical Representative (COTR) with a courtesy copy provided concurrently to the Contracting Officer (CO). **See HSAR 3052.242-72 Contracting**

Officer's Technical Representative (Dec 2003) at Paragraph 18 below for the COTR's email address. Upon receipt of invoice, the COTR, within five (5) business days, will ensure sufficiency and certify inspection and acceptance of services on Department of Homeland Security (DHS) Form 700-21 "Material Inspection and Receiving Report" then forward the completed DHS Form 700-21 with invoice and any applicable back-up documentation electronically to the CO for approval (unless invoice approval otherwise re-delegated to the COTR by the CO). The COTR will maintain copies of all invoices, back-up documentation, and completed DHS Form 700-21 in the official COTR file.

In parallel, the Contractor shall submit a copy of the invoice via e-mail to SAT.Invoice.Consolidation@dhs.gov & a hard copy to the following address:

Invoices shall be mailed to the following address:

DHS ICE
Burlington Finance Center
PO Box 1000
Williston, Vermont 05495-1000
Attn: S&T Division OPO

Department of Homeland Security
Office of Procurement Operations
Transportation Security Laboratories
Building 315
Atlantic City International Airport
Atlantic City, NJ 08405

8.3 To be deemed sufficient, each invoice must contain and correctly cite the following information in accordance with the Prompt Payment clause contained in the Contractor's GSA prime contract, (1) task order number being invoiced against; (2) the Contractor's business name and address exactly as it appears in the task order; (3) a company specific invoice number; (4) the Contractor's electronic funds transfer information (if applicable); (5) amount billed for by contract line item number (CLIN) formatted in a manner that mirrors the Price Schedule; (6) assignment of claims information (if applicable); (7) labor category, labor rate, site location, number of labor hours worked, and total for each site and all sites combined (rates must reflect those contained in the Price Schedule including discount); (8) Tax identification Number (TIN); (9) period services were performed; (10) procuring activity; and (11) point of contact, telephone number, and email address.

8.4 Invoices shall reflect any cost incurred with respect to previously approved travel expense identifying local or business (TDY) travel; description/purpose of travel, include dates; staff name(s); total travel amount for staff member per trip; lodging and transportation costs including Per Diem rate, and total monthly amount for all staff travel.

8.5 The Contractor's final invoice shall be identified as such and shall list all other invoices previously submitted under this task order.

9. Implementation of Executive Order (EO) 12334 Terrorist Financing

9.1 The Contractor is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the Contractor to ensure compliance with these Executive Orders and laws.

10. Disclosure of Information

10.1 Contractors are reminded that information furnished under this solicitation may be subject to disclosure under the Freedom of Information Act (FOIA). Therefore, all items that are confidential to business, or contain trade secrets, proprietary, or personnel information must be clearly marked. Marking of items will not necessarily preclude disclosure when the U.S. Office of Personnel Management (OPM or The Government) determines disclosure is warranted by FOIA. However, if such items are not marked, all information contained within the submitted documents will be deemed to be releasable.

10.2 Any information made available to the Contractor by the Government must be used only for the purpose of carrying out the provisions of this task order and must not be divulged or made known in any manner to any person except as may be necessary in the performance of the task order.

10.3 In performance of this task order, the Contractor assumes responsibility for protection of the confidentiality of Government records and must ensure that all work performed by its subcontractors shall be under the supervision of the Contractor or the Contractor's responsible employees.

10.4 Each officer or employee of the Contractor or any of its subcontractors to whom any Government record may be made available or disclosed must be notified in writing by the Contractor that information disclosed to such officer or employee can be used only for a purpose and to the extent authorized herein, and that further disclosure of any such information, by any means, for a purpose or to an extent unauthorized herein, may subject the offender to criminal sanctions imposed by 19 U.S.C. 641. That section provides, in pertinent part, that whoever knowingly converts to their use or the use of another, or without authority, sells, conveys, or disposes of any record of the United States or whoever receives the same with intent to convert it to their use or gain, knowing it to have been converted, shall be guilty of a crime punishable by a fine of up to \$10,000, or imprisoned up to ten years, or both.

11. Section 508 Compliance

11.1 Section 508 refers to Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d). Section 508 assessments are required of all systems and are intended to ensure that individuals with disabilities have comparable access to and use of information and data comparable to the access provided to individuals without disabilities (unless this would pose an undo burden on the Federal Agency). The assessment is not to include physical access at any defined-benefit technology solution-related site. The 508 assessment shall be performed by OPM.

The successful Contractor must make accessible to the Government, or its designee, information systems residing in the Contractor's (or as appropriate sub-Contractor's) facilities that support the operations and assets of the Government as part of this task order, so that the 508 assessment may be performed.

11.2 All Electronic and Information Technology (EIT) procured through this task order must meet the applicable accessibility standards at 29 USC 794d and 36 CFR 1194, unless an exception to this requirement exists as determined by the Government. See 29 USC 794d at <http://www.section508.gov/index.cfm?Fuseaction=Content&ID=12>, and 36 CFR 1194 implementation Section 508 of the Rehabilitation Act of 1973, as amended, at http://www.access-board.gov/sec508/508_standards.htm - PART 1194).

The following standards are applicable to this procurement:

a) [provided at time of award]

NOTE: The 508 standards do not require the installation of specific accessibility-related software or the attachment of an assistive technology device, but require that the EIT be compatible with such software and devices so that it can be made accessible if so required by the agency in the future.

12. Removal of Contractor Employees

12.1 The Contracting Officer may require dismissal from work of those Contractor employees which he/she deems incompetent, careless, insubordinate, unsuitable or otherwise objectionable, or whose continued employment he/she deems contrary to the public interest or inconsistent with the best interest of national security. The Contractor must fill out, and cause each of its employees on the contract work to fill out, for submission to the Government, such forms as may be necessary for security or other reasons.

13. Security Requirements

13.1 Identification/Building Pass

13.1.1 The Contractor shall coordinate with the COTR to assure that any Contractor employee requiring access to the DHS offices has a Contractor identification/building pass before the employee enters on duty under the task order. Personnel designated by the COTR shall complete appropriate forms specified by the DHS Office of Security for security clearance requirements. The Contractor shall see that all passes are returned to the Government as employees are dismissed, terminated or when the need for the employee to have access to DHS offices ceases.

13.2 Security Clearance Requirements

13.2.1 DHS has determined that performance of this task order requires that the Contractor, subcontractor(s), vendor(s), etc. (hereafter included in the term Contractor), require access to

classified National Security Information (herein known as classified information) and sensitive but unclassified (SBU) information. All Contractor personnel are required to have SECRET clearances.

13.2.2 If classified work is required under this work effort, the Government will provide specific guidance to the Contractor as to which work will be conducted in a classified manner and at which classification level. The Contractor shall also adhere to other applicable Government orders, guides and directives pertaining to classified or confidential work.

13.2.3 Security Requirements:

52.204-2 Security Requirements.

As prescribed in 4.404(a), insert the following clause:

Security Requirements (Aug 1996)

(a) This clause applies to the extent that this contract involves access to information classified “Confidential,” “Secret,” or “Top Secret.”

(b) The Contractor shall comply with—

(1) The Security Agreement (DD Form 441), including the *National Industrial Security Program Operating Manual* (DoD 5220.22-M); and

(2) Any revisions to that manual, notice of which has been furnished to the Contractor.

(c) If, subsequent to the date of this contract, the security classification or security requirements under this contract are changed by the Government and if the changes cause an increase or decrease in security costs or otherwise affect any other term or condition of this contract, the contract shall be subject to an equitable adjustment as if the changes were directed under the Changes clause of this contract.

(d) The Contractor agrees to insert terms that conform substantially to the language of this clause, including this paragraph (d) but excluding any reference to the Changes clause of this contract, in all subcontracts under this contract that involve access to classified information.

(End of clause)

13.2.4 The Contractor shall possess a facility security clearance or demonstrate the ability to obtain a security clearance. As such, the Contractor shall comply with DD Form 254.

13.3 Suitability Determination

13.3.1 DHS has and will exercise full control over granting, denying, withholding or terminating unescorted Government facility and/or sensitive Government information access for Contractor employees, based upon the results of a background investigation. DHS may, as it deems appropriate, authorize and make a favorable entry on duty (EOD) decision based on preliminary security checks. The favorable EOD decision would allow the employees to commence work temporarily prior to the completion of the full investigation. The granting of a favorable EOD decision shall not be considered as assurance that a full employment suitability authorization will follow as a result thereof. The granting of a favorable EOD decision or a full employment

suitability determination shall in no way prevent, preclude, or bar the withdrawal or termination of any such access by DHS, at any time during the term of the task order. No employee of the Contractor shall be allowed unescorted access to a Government facility without a favorable EOD decision or suitability determination by the DHS Office of Security. Contract employees assigned to the task order not needing access to sensitive DHS information or recurring access to DHS facilities will not be subject to security suitability screening.

13.3.2 Contract employees awaiting an EOD decision may begin work on the task order provided they do not access sensitive Government information. Limited access to Government buildings is allowable prior to the EOD decision if the Contractor is escorted by a Government employee. This limited access is to allow Contractors to attend briefings, non-recurring meetings, and begin transition work.

13.4 Background Investigations

13.4.1 Contract employees (to include applicants, temporaries, part-time, and replacement employees) under the task order, needing access to sensitive information, shall undergo a position sensitivity analysis based on the duties each individual will perform on the task order. The results of the position sensitivity analysis shall identify the appropriate background investigation to be conducted. All background investigations will be processed through the DHS Office of Security. Prospective Contractor employees shall submit the following completed forms to the DHS Office of Security through the COTR no less than 30 days before the starting date of the task order or 30 days prior to entry on duty of any employees, whether a replacement, addition, subcontractor employee or vendor:

1. Standard Form 85P, "Questionnaire for Public Trust Positions"
2. FD Form 258, "Fingerprint Card" (2 copies)
3. Conditional Access to Sensitive But Unclassified Information Non-Disclosure Agreement
4. Disclosure and Authorization Pertaining to Consumer Reports Pursuant to the Fair Credit Reporting Act

13.4.2 Required forms will be provided by DHS at the time of award of the task order. Only complete packages will be accepted by the DHS Office of Security. Specific instructions on submission of packages will be provided upon award of the task order.

13.4.3 Be advised that unless an applicant requiring access to sensitive information has resided in the US for three of the past five years, the Government may not be able to complete a satisfactory background investigation. In such cases, DHS retains the right to deem an applicant as ineligible due to insufficient background information.

13.4.4 The use of Non-U.S. citizens, including Lawful Permanent Residents (LPRs) is not permitted in the performance of this task order for any position that involves access to or development of any DHS IT system. DHS will consider only U.S. Citizens and LPRs for employment on this task order. DHS will not approve LPRs for employment on this task order in any position that requires the LPR to access or assist in development, operation, management

or maintenance of DHS IT systems. By signing this task order, the Contractor agrees to this restriction. In those instances where other non-IT requirements contained in the task order can be met by using LPRs, those requirements shall be clearly described.

13.5 Continued Eligibility

13.5.1 If a prospective employee is found to be ineligible for access to Government facilities or information, the COTR will advise the Contractor that the employee shall not continue to work or to be assigned to work under the task order.

13.5.2 The DHS Office of Security may require drug screening for probable cause at any time and/or when the Contractor independently identifies, circumstances where probable cause exists.

13.5.3 DHS reserves the right and prerogative to deny and/or restrict the facility and information access of any Contractor employee whose actions are in conflict with the standards of conduct, 5 CFR 2635 and 5 CFR 3801, or whom DHS determines to present a risk of compromising sensitive Government information to which he or she would have access under this task order.

13.5.4 The Contractor will report any adverse information coming to their attention concerning Contractor employees under the task order to the DHS Office of Security. Reports based on rumor or innuendo should not be made. The subsequent termination of employment of an employee does not obviate the requirement to submit this report. The report shall include the employee's name and social security number, along with the adverse information being reported.

13.5.5 The DHS Office of Security must be notified of all terminations/resignations within five days of occurrence. The Contractor will return any expired DHS issued identification cards and building passes, or those of terminated employees to the COTR. If identification card or building pass is not available to be returned, a report must be submitted to the COTR, referencing the pass or card number, name of individual to whom issued, the last known location and disposition of the pass or card.

13.6 Employment Eligibility

13.6.1 The Contractor must agree that each employee working on this task order will have a Social Security Card issued and approved by the Social Security Administration. The Contractor shall be responsible to the Government for acts and omissions of his own employees and for any Subcontractor(s) and their employees.

13.6.2 Subject to existing law, regulations and/or other provisions of this task order, illegal or undocumented aliens will not be employed by the Contractor, or with this task order. The Contractor will ensure that this provision is expressly incorporated into any and all subcontracts or subordinate agreements issued in support of this task order.

13.7 Security Management

13.7.1 The Contractor shall appoint a senior official to act the corporate security officer. This

individual should be the Program Manager. This responsibility is not to be separately billed under the contract. The individual will interface with the DHS Office of Security through the COTR on all security matters, to include physical, personnel, and protection of all Government information and data accessed by the Contractor.

13.7.2 The COTR and the DHS Office of Security shall have the right to inspect the procedures, methods, and facilities utilized by the Contractor in complying with the security requirements under this task order. Should the COTR determine that the Contractor is not complying with the security requirements of this task order, the Contractor will be informed in writing by the contracting officer of the proper action to be taken in order to effect compliance with such requirements.

13.8 Information Technology Clearance

13.8.1 When sensitive Government information is processed on Department telecommunications and automated information systems, the Contractor agrees to provide for the administrative control of sensitive data being processed and to adhere to the procedures governing such data as outlined in *DHS IT Security Program Publication DHS MD 4300.Pub*. Contractor personnel must have favorably adjudicated background investigations commensurate with the define sensitivity level.

13.8.2 Contractors who fail to comply with Department security policy are subject to having their access to Department IT systems and facilities terminated, whether or not the failure results in criminal prosecution. Any person who improperly discloses sensitive information is subject to criminal and civil penalties and sanctions under a variety of laws (e.g., Privacy Act).

13.8.3 Information Technology Security Training and Oversight:

13.8.3.1 All Contractor employees using Department automated systems or processing Department sensitive data will be required to complete security awareness training. This training will be provided by the appropriate component agency of DHS.

13.8.3.2 Contractors who are involved with the management, use, or operation of any IT systems that handle sensitive information within or under the supervision of the Department shall receive periodic training at least annually in security awareness and accepted security practices and systems rules of behavior. Department Contractors with significant security responsibilities shall receive specialized training specific to their security responsibilities annually. The level of training shall be commensurate with the individual's duties and responsibilities and is intended to promote a consistent understanding of the principles and concepts of telecommunications and IT systems security.

13.8.3.3 All personnel who access Department information systems will be continually evaluated while performing these duties. Supervisors should be aware of any unusual or inappropriate behavior by personnel accessing systems. Any unauthorized access, sharing of passwords, or other questionable security procedures should be reported to the local DHS Office of Security or Information Systems Security Officer (ISSO).

14. Non-Disclosure of Protected Critical Infrastructure Information

14.1 The Contractor and the Government agree to implement an interim rule promulgating new regulations at Title 6 Code of Federal Regulations Section 29.8(c) to govern procedures for handling critical infrastructure information. The regulations detailed in the interim rule, which was effective upon publication pursuant to Section 808 of the Congressional Review Act, were promulgated pursuant to Title II, Section 214 of the Homeland Security Act of 2002, known as the Critical Infrastructure Information Act of 2002 (CIIA Act).

14.2 The Contractor shall not request, obtain, maintain or use Protected CII without a prior written certification from the Protected CII Program Manager or a Protected CII Officer that conforms to the requirements of Section 29.8(c) of the regulations in the Interim Rule.

14.3 The Contractor shall comply with all requirements of the Protected CII (PCII) Program set out in the CII Act, in the implementing regulations published in the Interim Rule, and in the PCII Procedures Manual as they may be amended from time to time, and shall safeguard Protected CII in accordance with the procedures contained therein. The Contractor shall ensure that each of its employees, consultants and subcontractors who work on the PCII Program have executed Non-Disclosure Agreements (NDAs) in a form prescribed by the PCII Program Manager. The Contractor shall ensure that each of its employees, consultants and subcontractors has executed a NDA and agrees that none of its employees, consultants or subcontractors will be given access to Protected CII without having previously executed a NDA.

15. Standards of Conduct at Government Installations

15.1 The Contractor shall be responsible for maintaining satisfactory standards of employee competency, conduct, appearance, and integrity and shall be responsible for taking such disciplinary action with respect to his employees, as may be necessary. The Contractor is also responsible for ensuring that his employees do not disturb paper on desks, open desk drawers or cabinets or use Government telephones, except as authorized.

15.2 If due to the fault or neglect of the Contractor, his agents, or employees, any Government property, equipment, stock, or supplies are lost or damaged during performance of this task order, the Contractor shall be responsible for such loss or damage and the Government, at its option, may either require the Contractor to replace all property or to reimburse the Government for the full value of the lost or damaged property.

15.3 The Contractor is responsible for maintaining assigned space(s) in a clean and orderly fashion during the course of this task order. Furniture as may be assigned to the space(s) shall remain in place and not removed from areas. All telephones are for conducting official Government business only. The Contractor is responsible for exercising control over all supplies, materials, and equipment of a personal or company nature.

16. Public Release of Information

16.1 Publicity releases in connection with this task order shall not be made by the Contractor unless prior written approval has been received from the Contracting Officer.

17. Labor Categories/Qualifications

17.1 The Contractor shall provide, at a minimum, the following personnel positions for work to be performed under this task order as it comports to the specific labor category description in their GSA contract possessing the following qualifications:

17.1-1. CLERICAL – Provides secretarial/clerical support for program manager, supervisor and office staff members. Performs varied clerical and secretarial duties requiring knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office. Uses own judgment and initiative to determine the approach or action to be taken in non-routine situations and in interpreting and adapting guidelines. Has above average communication skills, both written and oral. Maintains a close and highly responsive relationship to the day-to-day activities of the office and works fairly independently, receiving a minimum of detailed supervision and guidance.

QUALIFICATIONS: An associate's degree from an accredited college or university or equivalent degree. Study shall have included specialized courses in secretarial science. Shall have at least one year of experience in performing secretarial tasks in support of engineering and scientific activities **OR** shall have at least 3 years experience in performing secretarial task in support of engineering, scientific or professional activities.

17.1-2. COMPUTER SYSTEMS ANALYST - Performs systems engineering function primarily with respect to computer functional allocations, software development, and hardware development. Serves as computer programmer analyst, performs development and application of computer software, data analysis, and data processing. Knowledgeable in government ADP standards, policies, modern communications networks, operating systems, World Wide Web applications, and higher level computer languages. Has experience in computer systems interfaces. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor of Science degree or higher from an accredited college or university in computer system or software engineering and 5 years experience in software development. Experience shall demonstrate the ability to perform software system analysis, monitor software development according to relevant government standards and write software development assessments.

17.1-3. CONTRACT MANAGER - Serves as the primary contact point for work related to this contractual effort. The contract manager shall be capable of the following: Overall contract and task management, performing planning and scheduling, progress reporting, cost control, organization and manpower planning, contract administration, developing work breakdown structures, performance analysis, and technical risk analysis, financial planning, quality

assurance, and quality control on all submitted deliverables. Keeps customer informed of ongoing technical/administrative concerns, proficient in the use of personal computers, and has working knowledge of commercial project management software programs. Is proficient in project management skills, including cost and scheduling, contracting, budgeting, risk analysis, leadership, quality, and earned value analysis.

QUALIFICATIONS: A master's degree in either a business, technical or engineering field from an accredited college or university and 5 years of program management experience in planning, managing and implementing projects/programs of which years shall be managing complex transportation security research, development, test and evaluation contracts or related activities. Shall have demonstrated knowledge and understanding of national security systems. Shall have PMI or equivalent certification in project management.

17.1-4. DOCUMENTATION SPECIALIST - Provides word processing, graphic arts or technical writing support in the preparation of technical and administrative publications and presentations associated with engineering and scientific research, development, testing, studies, and related activities. Performs moderately complex word processing and graphics tasks requiring considerable classroom or on-the-job training, or performs technical writing tasks requiring comprehensive technical knowledge of writing and editing practices and procedures. Provides direction to junior documentation specialists and interfaces directly with the task originator regarding specific work assignments.

QUALIFICATIONS: An Associates degree from an accredited college or university. Study must have included courses in word processing, technical writing/editing, graphic arts, and presentations. Must be capable of performing moderately complex word processing, technical writing and editing, graphic arts, and visual presentations associated with aircraft safety research, development, test, and evaluation activities with full effectiveness after a brief orientation period **AND** shall have at least 5 years of word processing, technical writing/editing, graphic arts, and visual presentation experience in the aircraft safety research engineering or related research scientific fields **OR** shall have at least 10 years of word processing, technical writing/editing, graphic arts, and visual presentation experience in the transportation security research engineering or related fields.

17.1-5. ENGINEER I - Performs engineering analyses of security related systems to determine potential for further development, production, interface to other systems, and usefulness in the intended environment. Requires no more than moderate supervision. Performs test assembly, conducts test, collects test data, witnesses test performance; prepares test/program assessment reports. Engineer shall be capable of developing work breakdown structures, identification of critical path elements to project accomplishment, and tracking of project activities. Has good communication skills is able to write with moderate supervision project documents, including project plans, test plans and procedures, data analysis reports, project final reports. Has experience in data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university in Engineering. Shall have 2 years experience that demonstrates knowledge of System, Electrical/Electronics engineering discipline. Knowledge is defined as the comprehensive, in-depth knowledge of systems engineering and advanced technology development. Shall have security, physical security, security sensor, or explosive detection systems or related engineering experience demonstrating the ability to work with complex issues related to design, development, and test and evaluation.

17.1-6. MECHANICAL ENGINEER - Performs engineering design and analyses of complex security related systems to determine potential for further development, production, and interface to other systems, and usefulness in the homeland security environment. Requires little or no supervision. Writes test plans and procedures; conducts test, collects test data, and prepares test/program assessment reports. Engineer shall be capable of developing work breakdown structures, identification of critical path elements to project accomplishment, and tracking of project activities. Has above average communication skills is able to write with little supervision project documents, including project plans, test plans and procedures, data analysis reports, project final reports. Has experience in system automation, data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university in Engineering. Shall have 6 years experience that demonstrates a professional knowledge of System, Electrical/Electronics engineering discipline. Professional knowledge is defined as the comprehensive, in-depth knowledge of systems engineering and advanced technology development. Shall have security, physical security, security sensor, or explosive detection systems or related engineering experience demonstrating the ability to work with complex Issues related to design, development, and test and evaluation.

17.1-7. ENGINEER III – Performs engineering design and analyses or highly complex security and security related systems to determine potential for further development, production, and interface to other systems, and usefulness in the homeland security environment. Requires no supervision. Reviews and comments on test plans and procedures; conducts tests, collects test data, prepares test/program assessment reports. Shall be capable of developing work breakdown structures, identification of critical path elements to project accomplishment, and tracking of project activities. Has good communications skills, is able to write with no supervision project documents including project plans, test plans and procedures, data analysis reports, and project final reports. Has experience in system automation, data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university in Engineering. Shall have 10 years experience that demonstrates a professional knowledge of System, Electrical/Electronics engineering discipline. Professional knowledge is defined as the comprehensive, in-depth knowledge of systems engineering and advanced technology development. Shall have security, physical security, security sensor, or explosive detection systems or related engineering experience demonstrating the ability to work with complex issues

related to design, development, and test and evaluation.

17.1-8. ENGINEERING TECHNICIAN I: Provides technical assistance in engineering and scientific research, development, testing and related activities. Performs simple tasks under close supervision or from detailed procedures in process or completion. Performs at this level on or on one or a combination of the following tasks (not limited to :)

- Construct simple equipment or parts.
- Service instruments or equipment
- Conduct a variety of standardized tests;
- May prepare test specimens
- Set up equipment

QUALIFICATIONS: Successful completion of study from an accredited college or university leading to an associate of applied Science or equivalent degree, or from an accredited technical school leading to a mechanic/technician rating **OR** shall have at least 7 years of technical experience. Must have experience that demonstrates comprehensive knowledge on solving complex technical problems associated with engineering and scientific activities. Shall have at least 3 years of demonstrated experience using a variety of tools and test equipment.

17.1-9. ENGINEERING TECHNICIAN II. Provides technical assistance in engineering and scientific research, development, and testing and related activities. Performs simple tasks under close supervision or from detailed procedures in process or completion. Performs at this level on or on one or a combination of the following tasks (not limited to :)

- Construct simple equipment or parts.
- Service instruments or equipment
- Conduct a variety of standardized tests;
- May prepare test specimens
- Set up equipment

QUALIFICATIONS: Successful completion of study from an accredited college or university leading to an associate of applied Science or equivalent degree, or from an accredited technical school leading to a mechanic/technician rating. Experience that demonstrates comprehensive knowledge on solving complex technical problems associated with engineering and scientific activities. Shall have at least 6 years of demonstrated experience using a variety of tools and test equipment.

17.1-10. EXPLOSIVES SPECIALIST - Provides expertise in the composition and formulation of military, commercial and improvised types of explosives and improvised explosive devices (IEDs), including ability to design and construct IED configurations that may be concealed within passenger bags, on personnel, or in other medium that could lead to placement on an aircraft. Applicant is well versed in explosives effects mitigation, safe separation distances, and risk management related to operations involving energetic materials. Requires some supervision. Has experience with non-destructive inspection (NDI) technologies and their application to detecting explosive materials. Familiar with chemical formulations and properties related to NDI technologies.

QUALIFICATIONS: Successful completion of either Naval School, Explosives Ordnance Disposal, Indian Head, MD; or Hazardous Devices School, Huntsville, AL; or equivalent specialized instruction and training on the handling and safe use of explosive and energetic materials. Shall have at least 5 years in the explosives field, which demonstrates a thorough knowledge of military, commercial, and improvised types of explosives and improvised explosive devices (IEDs).

17.1-11. JUNIOR HUMAN FACTORS ENGINEER I: Assists in the conduct of human-in-the-loop experiments in laboratory and field environments, including writing and reviewing test and evaluation plans; assembling test bag and image sets; drafting questionnaires; collecting test data; assisting in preparing test and evaluation reports; and briefing government staff on current activities. Assists in identifying system design features and characteristics that may adversely affect security equipment operators and maintainers. Assists in the evaluation of potential human-system performance improvements, including assisting in the conduct of usability assessments, changes in equipment design, operating procedures, staffing requirements, personnel selection, and training. Assists in engineering design and analyses of security equipment to determine potential for further development, production, and interface improvements and usefulness in the homeland environment. Has good verbal and written communication skills. Has moderate experience in data collection and reporting and a limited knowledge of data analysis. Requires no more than moderate supervision. Proficient in the use of personal computers and has working knowledge of commercial software programs, especially Microsoft Office Suite products, and other software on TSA workstations.

QUALIFICATIONS: A bachelor's degree in human factors or experimental psychology from an accredited college or university and at least 3 years related work experience. **OR** A master's degree in human factors or experimental psychology from an accredited college or university.

17.1-12. JUNIOR ENGINEER - Performs engineering/scientific design and analyses work, and provides engineering support in developing/evaluating specific research areas associated with evolving security technologies. Receives technical guidance, as required, from supervisor or higher level engineer. Assists in the preparation of technical plans, reports and technology studies; reviews and comments on past and present work related to specific research areas; prepares briefing material on ongoing activities; attends meetings with customer and other relevant contractor personnel in order to better understand engineering issues related to transportation security.

QUALIFICATIONS: **A Bachelor of Science in engineering/science from an accredited college or university. Shall have at least 1 year of research engineering/scientific experience; AND the demonstrated research experience gained through projects, programs, and education, that directly applies to the application of advanced transportation security research concepts, principles, practices, and techniques of research engineering in transportation security, electrical/electronics, mechanical, and materials.**

17.1-13. JUNIOR PHYSICIST - Performs studies and analyses related to the development of security technologies. Assists in planning, and executes experiments/tests related to the physics of explosives and weapons detection, including recording and analysis of data. Requires

moderate supervision. Contributes to comprehensive technical reports, data reports and other publications. Performs simple tasks with moderate supervision or from detailed TSA procedures. Has above average communication skills and is able to write project documents with moderate supervision.

QUALIFICATIONS: A Bachelor of Science degree in physics from an accredited college or university with 2 years experience in experimental or applied physics. Years of experience may not substitute for education.

17.1-14. PHYSICIST - Performs research, design, development, analysis, test and evaluation of complex security systems. Determines potential of physics approaches for further development, defines opportunities to interface various technologies/systems, and assesses usefulness of technologies in the homeland security environment. Requires little or no supervision. Writes experiment/test plans and procedures, conducts test, collects test data, and prepares technical reports. Must be able to perform a variety of complex laboratory analytical procedures. Has experience in automated data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs. Prepares and gives presentations at conferences and other meetings.

QUALIFICATIONS: A Master's Degree or higher degree in physics from an accredited college or university. Shall have 4 years experience that demonstrates a professional knowledge of physics, and/or development of physics-based systems. Professional knowledge is defined as the comprehensive, in-depth knowledge of advanced technology development. Years of experience may not substitute for education.

17.1-15. PRINCIPAL SCIENTIST / SR. PHYSICIST - Serves as the senior technical lead for the work related to this contractual effort. Responsible for planning, executing, and documenting various aspects of research, development, testing and analysis of security systems. Responsible for assembling the technical team required for the project. Prepares technical plans and reports; reviews and comments on past and present work related to specific research areas; briefs customer on ongoing activities; meets with customer and other relevant personnel as required. Prepares and gives presentations at professional conferences and other meetings.

QUALIFICATIONS: A Ph.D. degree in a natural science (e.g. physics, chemistry, biology) or engineering from an accredited college or university in engineering/science and the demonstrated research experience gained through projects, programs, and education that directly apply to the application of advanced transportation security concepts, principles, practices, and techniques. Years of experience may not substitute for education.

17.1-16. PROGRAM MANAGER – A program manager shall be capable of the following: Performing planning and scheduling, progress reporting, cost control, organization and manpower planning, developing work breakdown structures, performance analysis, technical risk analysis, financial planning, quality assurance, and quality control on all submitted deliverables. Keeps customer informed of ongoing technical/administrative concerns, possessing excellent communication skills, both oral and written.

QUALIFICATOINS: A master's degree in either a business, technical or engineering field from an accredited college or university and 7 years of program management experience in planning, managing and implementing projects/programs of which 2 years shall be managing complex transportation security research, development, test and evaluation contracts or related activities AND Shall have PMI or equivalent certification in project management. Shall have demonstrated knowledge and understanding of national security systems.

17.1-17. RESEARCH CHEMIST I. Responsible for executing, and documenting various aspects of testing and analysis associated with the development of Security related systems. Must be able to test and/or evaluate a number of commercial and prototype explosives detection systems. Candidate shall possess sufficient skills to perform parametric testing and evaluation of candidate systems to determine parameters such as lower limit of detection, sensitivity, selectivity, dynamic range or other instrument performance characteristics. Chemist must be capable of performing literature searches and assessing the current state of the art in approaching any research program. Must be able to write, review, and/or comment on test plans and procedures. Chemist must be able to perform a variety of routine laboratory analytical procedures, including (4 of 7) colorimetric analysis, gas chromatography, liquid chromatography, thermal gravimetric analysis, differential scanning calorimetry, infrared spectroscopy and mass spectroscopy. Has good communication skills and is able to write project documents with little supervision, including project plans, test plans and procedures, data analysis reports, project final reports.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university certified by the American Chemical Society or equal. Shall have a minimum of 3 years laboratory experience in a chemical analysis.

17.1-18. RESEARCH CHEMIST II - Responsible for executing, and documenting various aspects of testing and analysis associated with the development of Security related systems. Must be able to test and/or evaluate a number of commercial and prototype explosives detection systems. Candidate shall possess sufficient skills to perform parametric testing and evaluation of candidate systems to determine parameters such as lower limit of detection, sensitivity, selectivity, dynamic range or other instrument performance characteristics. Chemist must be capable of performing literature searches and assessing the current state of the art in approaching any research program. Must be able to write, review, and/or comment on test plans and procedures. Chemist must be able to perform a variety of routine laboratory analytical procedures, including (5 of 7) colorimetric analysis, gas chromatography, liquid chromatography, thermal gravimetric analysis, differential scanning calorimetry, infrared spectroscopy and mass spectroscopy. Has good communication skills and is able to write project documents with little supervision, including project plans, test plans and procedures, data analysis reports, project final reports. Candidate should have experience in the areas of sensor systems, MEMS, microsensors, preconcentrators, chemoselective coatings, vapor collection and trace chemical analysis methods.

QUALIFICATIONS: A Master's Degree from an accredited college or university certified by

the American Chemical Society or equal. Shall have a minimum of 5 years laboratory experience in a chemical analysis or independent research.

17.1-19. SENIOR ENGINEER - Performs in-depth engineering analyses of security related systems to determine potential for further development, production, Interface to other systems, and usefulness in the homeland security environment. Witnesses test performance; prepares test/program assessment reports; briefs government staff on ongoing activities; interviews government and non-government people in order to improve system engineering knowledge. Can complete project life cycle work (planning, development, execution, termination), develop work breakdown structures, PERT/CPM critical path working knowledge, project budgets, and tracking of project activities. Has good communication skills and is able to write with little or no supervision project documents, including project plans, test plans and procedures, data analysis reports, project final reports. Has working knowledge of commercial project management software programs.

QUALIFICATIONS: A Bachelors Degree in Engineering from an accredited college or university. Shall have 10 years experience that demonstrates a professional knowledge of Systems development and technology development. Professional knowledge is defined as the comprehensive, In-depth knowledge of systems engineering and advanced technology development.

17.1-20. SENIOR RESEARCH CHEMIST – Responsible for executing, and documenting various aspects of testing and analysis associated with the development of Security related systems. Must be able to test and/or evaluate a number of commercial and prototype explosives detection systems. Candidate shall possess sufficient skills to perform parametric testing and evaluation of candidate systems to determine parameters such as lower limit of detection, sensitivity, selectivity, dynamic range or other instrument performance characteristics. Chemist must be capable of performing literature searches and assessing the current state of the art in approaching any research program. Must be able to write, review, and/or comment on test plans and procedures. Chemist must be able to perform a variety of routine laboratory analytical procedures, including (5 of 7) colorimetric analysis, gas chromatography, liquid chromatography, thermal gravimetric analysis, differential scanning calorimetry, infrared spectroscopy and mass spectroscopy. Has good communication skills and is able to write project documents with little supervision, including project plans, test plans and procedures, data analysis reports, project final reports. Candidate must possess independent research experience and demonstrated capability in the planning and execution of research and development projects. Candidate should have experience in the areas of sensor systems, MEMS, microsensors, preconcentrators, chemoselective coatings, vapor collection and trace chemical analysis methods.

QUALIFICATIONS: A Ph.D degree from an accredited college or university certified by the American Chemical Society or equal. Shall have a minimum of 8 years laboratory experience in a chemical performing analysis or independent research.

17.1-21. TECHNICAL WRITER - Supports program activities in the areas of developing key documentation materials for the program plans, and project plans developed. Responsibilities include writing, evaluating, editing, and developing technical materials for publication. Team player with strong inter-personal and communication skills. Ability to work within project teams and towards established time lines.

QUALIFICATIONS: A Bachelor's Degree in English, Biology, Physics, Biochemistry, Chemistry or equivalent with minimum of 5-8 years related experience in technical writing. Must possess good communication skills. Background and experience with program and project management plans is a strong plus.

17.1-22. SENIOR HUMAN FACTORS ENGINEER (Key labor category) - Identifies system design features and characteristics that adversely affect operators and maintainers. Evaluates accompanying human performance concerns and issues then designs and conducts R&D to evaluate potential solutions including changes in equipment design, procedures, manpower, personnel, and/or training. Performs in-depth analyses of complex homeland security related systems to determine potential for further development, production, and interface to other systems, and usefulness in the homeland environment. Reviews and comments on test plans and procedures; witnesses test performance; prepares test/program assessment reports; briefs government staff on ongoing activities; interviews government and non-government people in order to improve system engineering knowledge. Has knowledge and/or experience in systems integration. Can complete project life cycle work (planning, development, execution, termination), develop work breakdown structures, PERT/CPM critical path working knowledge, project budgets, and tracking of project activities. Has good communication skills and is able to write with no supervision project documents, including project plans, test plans and procedures, data analysis reports, project final reports, white papers, memorandum and correspondence. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A doctoral degree or higher in human factors or experimental psychology from an accredited college or university. Shall have 10 year experience that demonstrates a professional knowledge of identifying system design features adversely affecting operators and maintainers as well as identifying solutions involving manpower, personnel, training, and/or human factors engineering. Years of experience may not substitute for education.

17.2 Although the Government believes that the above-presented labor categories are required to fulfill the requirements listed in the Statement of Work, it is open to explore other alternatives. As such, the Contractor has the option of proposing a different labor mix and skill set that it believes could meet the requirements listed in the Statement of Work. The Government reserves the right to determine the acceptability of the Contractor's alternative approach.

18. Task Order Clauses

18.1 The Contractor's GSA Schedule contract clauses are hereby incorporated into this task order.

18.2 This task order incorporates one or more clauses by reference (see table below), 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

address: <http://acquisition.gov/comp/far/index.html> or for DHS specific clauses at <http://farsite.hill.af.mil/VFHSAR1.htm>

Clause	Title	Date
	DHS Clauses/Provisions	
3052.204-70	Security Requirements for Unclassified Information Technology Resources	June 2006
3052.204-71	Contractor Employee Access	June 2006
3052.204-71–Alt I	Contractor Employee Access	June 2006
3052.209-70	Prohibition on Contracts with Corporate Expatriates	June 2006
3052.209.72	Organizational Conflict of Interest	June 2006
3052.209.73	Limitation of Future Contracting	June 2006
3052.222-70	Strikes or Picketing Affecting Timely Completion of the Contract Work	Dec 2003
3052.222-71	Strikes or Picketing Affecting Access to a DHS Facility	Dec 2003
3052.228-70	Insurance	Dec 2003
3052.237-71	Information Technology Systems Access for Contractor	Dec 2003
3052.242-71	Dissemination of Contract Information	Dec 2003
3052.242-72	Contracting Officer’s Technical Representative	Dec 2003
3052.245-70	Government Property Reports	Dec 2003
	Additional FAR Clauses	
52.227-2	Notice and Assistance Regarding Patent and Copyright Infringement	Aug 1996
52.227-3	Patent Indemnity	April 1984
52.227-14	Rights in Data—General	June 1987
52.227-16	Additional Data Requirements	June 1987
52.227-17	Rights In Data-Special Works	June 1987
52.227-18	Rights in Data--Existing Works	June 1987
52.227-19	Commercial Computer Software- Restricted Rights	June 1987
52.237-3	Continuity of Services	Jan 1991
52.246-6	Inspection – Time-and-Materials and Labor-Hour	May 2001

FAR 52.217-8 - Option to Extend Services (Nov 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 15 days prior to the task order’s expiration date.

FAR 52.217-9 Option to Extend the Term of the Contract (Mar 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 days prior to the contract expiration date provided that the Government gives the Contractor a

preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.

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

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 53 months.

52.232-7 Payments under Time-and-Materials and Labor-Hour Contracts (Dec 2002)

The Government will pay the Contractor, as follows, upon the submission of invoices or vouchers approved by the Contracting Officer:

(a) Hourly rate.

(1) The amounts shall be computed by multiplying the appropriate hourly rates prescribed in the Schedule by the number of direct labor hours performed. The rates shall include wages, indirect costs, general and administrative expense, and profit. Fractional parts of an hour shall be payable on a prorated basis. Vouchers may be submitted once each month (or at more frequent intervals, if approved by the Contracting Officer), to the Contracting Officer or designee. The Contractor shall substantiate vouchers by evidence of actual payment and by individual daily job timecards, or other substantiation approved by the Contracting Officer. Promptly after receipt of each substantiated voucher, the Government shall, except as otherwise provided in this contract, and subject to the terms of (e) of this section, pay the voucher as approved by the Contracting Officer.

(2) Unless otherwise prescribed in the Schedule, the Contracting Officer shall withhold 5 percent of the amounts due under this paragraph (a), but the total amount withheld shall not exceed \$50,000. The amounts withheld shall be retained until the execution and delivery of a release by the Contractor as provided in paragraph (f) of this section.

(3) Unless the Schedule prescribes otherwise, the hourly rates in the Schedule shall not be varied by virtue of the Contractor having performed work on an overtime basis. If no overtime rates are provided in the Schedule and overtime work is approved in advance by the Contracting Officer, overtime rates shall be negotiated. Failure to agree upon these overtime rates shall be treated as a dispute under the Disputes clause of this contract. If the Schedule provides rates for overtime, the premium portion of those rates will be reimbursable only to the extent the overtime is approved by the Contracting Officer.

(b) Materials and subcontracts.

(1) The Contracting Officer will determine allowable costs of direct materials in accordance with Subpart 31.2 of the Federal Acquisition Regulation (FAR) in effect on the date of this contract. Direct materials, as used in this clause, are those materials that enter directly into the end

product, or that are used or consumed directly in connection with the furnishing of the end product.

(2) The Contractor may include reasonable and allocable material handling costs in the charge for material to the extent they are clearly excluded from the hourly rate. Material handling costs are comprised of indirect costs, including, when appropriate, general and administrative expense allocated to direct materials in accordance with the Contractor's usual accounting practices consistent with Subpart 31.2 of the FAR.

(3) The Government will reimburse the Contractor for supplies and services purchased directly for the contract when the Contractor—

(i) Has made payments of cash, checks, or other forms of payment for these purchased supplies or services; or

(ii) Will make these payments determined due—

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

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

(4)(i) The Government will reimburse the Contractor for costs of subcontracts that are authorized under the subcontracts clause of this contract, provided that the costs are consistent with paragraph (b)(5) of this clause.

(ii) The Government will limit reimbursable costs in connection with subcontracts to the amounts paid for supplies and services purchased directly for the contract when the Contractor has made or will make payments determined due of cash, checks, or other forms of payment to the subcontractor—

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

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

(iii) The Government will not reimburse the Contractor for any costs arising from the letting, administration, or supervision of performance of the subcontract, if the costs are included in the hourly rates payable under paragraph (a)(1) of this clause.

(5) To the extent able, the Contractor shall—

(i) Obtain materials at the most advantageous prices available with due regard to securing prompt delivery of satisfactory materials; and

(ii) Take all cash and trade discounts, rebates, allowances, credits, salvage, commissions, and other benefits. When unable to take advantage of the benefits, the Contractor shall promptly notify the Contracting Officer and give the reasons. The Contractor shall give credit to the Government for cash and trade discounts, rebates, scrap, commissions, and other amounts that have accrued to the benefit of the Contractor, or would have accrued except for the fault or neglect of the Contractor. The Contractor shall not deduct from gross costs the benefits lost without fault or neglect on the part of the Contractor, or lost through fault of the Government.

(c) Total cost. It is estimated that the total cost to the Government for the performance of this contract shall not exceed the ceiling price set forth in the Schedule and the Contractor agrees to use its best efforts to perform the work specified in the Schedule and all obligations under this contract within such ceiling price. If at any time the Contractor has reason to believe that the hourly rate payments and material costs that will accrue in performing this contract in the next succeeding 30 days, if added to all other payments and costs previously accrued, will exceed 85 percent of the ceiling price in the Schedule, the Contractor shall notify the Contracting Officer giving a revised estimate of the total price to the Government for performing this contract with supporting reasons and documentation. If at any time during performing this contract, the Contractor has reason to believe that the total price to the Government for performing this contract will be substantially greater or less than the then stated ceiling price, the Contractor shall so notify the Contracting Officer, giving a revised estimate of the total price for performing this contract, with supporting reasons and documentation. If at any time during performing this contract, the Government has reason to believe that the work to be required in performing this contract will be substantially greater or less than the stated ceiling price, the Contracting Officer will so advise the Contractor, giving the then revised estimate of the total amount of effort to be required under the contract.

(d) Ceiling price. The Government shall not be obligated to pay the Contractor any amount in excess of the ceiling price in the Schedule, and the Contractor shall not be obligated to continue performance if to do so would exceed the ceiling price set forth in the Schedule, unless and until the Contracting Officer shall have notified the Contractor in writing that the ceiling price has been increased and shall have specified in the notice a revised ceiling that shall constitute the ceiling price for performance under this contract. When and to the extent that the ceiling price set forth in the Schedule has been increased, any hours expended and material costs incurred by the Contractor in excess of the ceiling price before the increase shall be allowable to the same extent as if the hours expended and material costs had been incurred after the increase in the ceiling price.

(e) Audit. At any time before final payment under this contract the Contracting Officer may request audit of the invoices or vouchers and substantiating material. Each payment previously made shall be subject to reduction to the extent of amounts, on preceding invoices or vouchers, that are found by the Contracting Officer not to have been properly payable and shall also be subject to reduction for overpayments or to increase for underpayments. Upon receipt and approval of the voucher or invoice designated by the Contractor as the "completion voucher" or "completion invoice" and substantiating material, and upon compliance by the Contractor with all terms of this contract (including, without limitation, terms relating to patents and the terms of (f) and (g) of this section), the Government shall promptly pay any balance due the Contractor.

The completion invoice or voucher, and substantiating material, shall be submitted by the Contractor as promptly as practicable following completion of the work under this contract, but in no event later than 1 year (or such longer period as the Contracting Officer may approve in writing) from the date of completion.

(f) Assignment. The Contractor, and each assignee under an assignment entered into under this contract and in effect at the time of final payment under this contract, shall execute and deliver, at the time of and as a condition precedent to final payment under this contract, a release discharging the Government, its officers, agents, and employees of and from all liabilities, obligations, and claims arising out of or under this contract, subject only to the following exceptions:

(1) Specified claims in stated amounts, or in estimated amounts if the amounts are not susceptible of exact statement by the Contractor.

(2) Claims, together with reasonable incidental expenses, based upon the liabilities of the Contractor to third parties arising out of performing this contract, that are not known to the Contractor on the date of the execution of the release, and of which the Contractor gives notice in writing to the Contracting Officer not more than 6 years after the date of the release or the date of any notice to the Contractor that the Government is prepared to make final payment, whichever is earlier.

(3) Claims for reimbursement of costs (other than expenses of the Contractor by reason of its indemnification of the Government against patent liability), including reasonable incidental expenses, incurred by the Contractor under the terms of this contract relating to patents.

(g) Refunds. The Contractor agrees that any refunds, rebates, or credits (including any related interest) accruing to or received by the Contractor or any assignee, that arise under the materials portion of this contract and for which the Contractor has received reimbursement, shall be paid by the Contractor to the Government. The Contractor and each assignee, under an assignment entered into under this contract and in effect at the time of final payment under this contract, shall execute and deliver, at the time of and as a condition precedent to final payment under this contract, an assignment to the Government of such refunds, rebates, or credits (including any interest) in form and substance satisfactory to the Contracting Officer.

(h) Interim payments.

(1) Interim payments made prior to the final payment under the contract are contract financing payments. Contract financing payments are not subject to the interest penalty provisions of the Prompt Payment Act.

(2) The designated payment office will make interim payments for contract financing on the

30th day after the designated billing office receives a proper payment request. In the event that the Government requires an audit or other review of a specific payment request to ensure

compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the specified due date.

52.243-3 -- Changes -- Time-and-Materials or Labor-Hours (Sept 2000)

(a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:

- (1) Description of services to be performed.
- (2) Time of performance (*i.e.*, hours of the day, days of the week, etc.).
- (3) Place of performance of the services.
- (4) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the Government in accordance with the drawings, designs, or specifications.
- (5) Method of shipment or packing of supplies.
- (6) Place of delivery.
- (7) Amount of Government-furnished property.

(b) If any change causes an increase or decrease in any hourly rate, the ceiling price, or the time required for performance of any part of the work under this contract, whether or not changed by the order, or otherwise affects any other terms and conditions of this contract, the Contracting Officer will make an equitable adjustment in any one or more of the following and will modify the contract accordingly:

- (1) Ceiling price.
- (2) Hourly rates.
- (3) Delivery schedule.
- (4) Other affected terms.

(c) The Contractor shall assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

(d) Failure to agree to any adjustment will be a dispute under the Disputes clause. However, nothing in this clause excuses the Contractor from proceeding with the contract as changed.

HSAR 3052.215-70 Key Personnel or Facilities (Dec 2003)

(a) The personnel or facilities specified below are considered essential to the work being performed under this contract and may, with the consent of the contracting parties, be changed from time to time during the course of the contract by adding or deleting personnel or facilities, as appropriate.

(b) Before removing or replacing any of the specified individuals or facilities, the Contractor

shall notify the Contracting Officer, in writing, before the change becomes effective. The Contractor shall submit sufficient information to support the proposed action and to enable the Contracting Officer to evaluate the potential impact of the change on this contract. The Contractor shall not remove or replace personnel or facilities until the Contracting Officer approves the change.

The Key Personnel under this Contract are:

Contract Manager	Program Manager
Engineer III	Senior Engineer
Explosives Specialist	Senior Physicist
Physicist	Senior Research Chemist
Principal Scientist	

In the event the Contractor is proposing an alternative solution (See Section 17.2), the Contractor should provide the Government with a list of its proposed Key Personnel.

HSAR 3052.242-72 Contracting Officer’s Technical Representative (Dec 2003)

The Contracting Officer may designate Government personnel to act as the Contracting Officer’s Technical Representative (COTR) to perform functions under the contract, such as review or inspection and acceptance of supplies, services, including construction, and other functions of a technical nature. The Contracting Officer will provide a written notice of such designation to the Contractor within five working days after contract award or for construction, not less than five working days prior to giving the Contractor the notice to proceed. The designation letter will set forth the authorities and limitations of the COTR under the contract.

The Contracting Officer cannot authorize the COTR or any other representative to sign documents, such as contracts, contract modifications, etc., that require the signature of the Contracting Officer.

CONTRACTING OFFICER’S
TECHNICAL REPRESENTATIVE

Sharon Moore
William J. Hughes Technical Center
Transportation Security Laboratory, Bldg. 315
Atlantic City, NJ 08405
Telephone No.: (b)(2) (b)(6)
Fax No.: (b)(2) (b)(6)
Email Address: (b)(2) (b)(6)

Statement of Work for
HOMELAND SECURITY RESEARCH, ENGINEERING AND DEVELOPMENT (RE&D)
and DEVELOPMENTAL TEST AND EVALUATION (DT&E) TECHNICAL SUPPORT

**U.S. Department of Homeland Security
Science and Technology Directorate
Transportation Security Laboratory**

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Science and Technology Directorate (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland.

Transportation Security Laboratory (TSL), located at the William J. Hughes Technical Center Atlantic City International Airport, New Jersey, supports this effort through its mission of supporting the DHS national effort to counter current and future terrorist threats and criminal acts, including threats against airports, through research and implementation of new technologies. These threats and criminal acts can happen in any place in the country or in the world. Emergency national support could be required, and the developed technologies could be implemented on short notice, if national security were at stake.

This research and development (R&D) technical support service contract is required to complete specific research, engineering, development, and test and evaluation (REDTE), at a minimum. These support services will provide specific technical expertise to DHS, in accordance with technical criteria and disciplines determined by DHS.

Special legislative, legal, or regulatory authorities applicable to this solicitation:

National Industrial Security Procedures Operations Manual (NISPOM)

TSL Standard Operating Procedures

DHS/S&T/TSL Document Format Templates

49 CFR 1520 Protection of Sensitive Security Information

FAA Order 1700.8D, Standards for Preparing, Printing, and Distributing Federal Transportation Administration Formal Technical Reports;

FAA Order 1710.2B, Preparation and Issuance of Formal Reports, Technical Notes, and Other Documentation;

The TSL Document Submission Procedure *DOT/FAAICT-95/38*, dated June 1995

DD254 provided with this SOW

II. Scope of Work

The DHS Transportation Security Laboratory has a requirement for a research, engineering, development, Developmental Test and Evaluation and technical support service contractor to perform the activities and tasks specified within this statement of work.

The contractor shall have international supporting capability to provide on-site and offsite support to the national security mission of the Transportation Security Laboratory (TSL). The technical support services will assist the TSL in developing research and development technologies for the future and testing technologies around the world. The contractor shall support the program activities identified within this statement of work. The support services shall provide specific technical expertise to the TSL in accordance with technical criteria and disciplines determined by the DHS.

The general scope of work is to provide support in the following technology development areas:

- 1.1.1. Research and development
- 1.1.2. General engineering
- 1.1.3. Test and evaluation
- 1.1.4. Laboratory management

Deliverables. The contractor will provide all deliverables identified in this SOW directly to the DHS S&T Technical Representative with a copy of the transmittal letter to the Contracting Officer. Task order deliverables will be identified in the task orders.

Program Status Report. The contractor will deliver a monthly program status report on the 15th day of each month containing metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment information of all work performed hereunder. An electronic copy and two hard copies shall be delivered to the DHS S&T Contracting Officer Technical Representative (COTR) with a copy of the cover letter to the CO. Method of delivery for electronic copies to be determined at contract award.

No.	Item	SOW Paragraph	Draft Due Date	Final Due Date	Recipient
	<p>Contract Level Monthly Report The Contractor shall provide monthly status reports to the COTR. The MSR shall contain financial accountability of funds spent, hours expended by labor category, work performed, work planned, Earned Value Analyses, issues encountered. Funds spent</p>			15 th	CO/COTR

	and hours expended shall be reported for the reporting period as well as accumulative for the project. Work expected to be performed for the next reporting period shall also be provided. Any new risks and risk mitigation strategies shall be updated, as well. The contractors shall notify DHS when 75% of funds have been expended.				
	Project Plans	Task Order	14 Days from task Issuance	7 Days from Receipt of TSL comment	COTR, Technical Monitor
	Test and Evaluation Plans	Task Order	AS Determined by task	7 Days from Receipt of TSL comments	COTR, Technical Monitor
	Meeting Minutes	Task Order		5 days from meeting date	COTR, Technical Monitor
	Trip Reports	Task Order		7 days from date of return	COTR, Technical Monitor, and include in monthly report
	Quick Look Reports			2 days from tasking	Technical Monitor

	Technical Reports	Task ORder	As determined by task	7 days from receipt of TSL comments	COTR, Technical Monitor
	Conflict of Interest statements		As required	7 days from stated requirement	CO, COTR

	Security Reports			Quarterly	CO, COTR, Servicing Security element (SSE)
	Process Improvement Documents		As needed	Quarterly on the 5 th	CO, COTR

Delivery Instructions. The contractor shall provide 2 hard copies and 1 electronic copy of all deliverables to the COTR. Electronic deliverables shall be either on CD, or through a designated file exchange. The contractor also shall provide 1 copy of all deliverables to the CO in a media to be determined at contract award.

Trip reports. The contractor shall deliver a trip report of all project related trips within five business days of the conclusion of the trip. The trip report shall include the dates of the travel, purpose, name, organization and telephone number of persons contacted, any problems encountered, action items, plans, or other pertinent project information. The trip report shall be part of the monthly progress report.

Key Personnel provided by the vendor will have the skills and technical background necessary to successfully complete the tasks described in this SOW, including but not limited to the following: (see attached for labor categories and requirements)

III. Terms And Conditions

1. Task Order Type

1.1 This task order is awarded as a Time and Material contract.

1.2 The Contractor shall efficiently manage the total estimated labor hours and total costs authorized under the task order's Price Schedule, which collectively, represent a **Not-To-Exceed Ceiling Amount** based on projected hourly usage. The labor rates contained in the Price Schedule are fully burdened (loaded) fixed hourly rates that include wages, overhead, general and administrative expenses, and profit for each category of labor identified. These rates shall be consistent with those contained in the Contractor's previously competed General Services Administration (GSA) contract notwithstanding any reduction based on discounts offered the Government under this order.

1.3 Pursuant to Sub-paragraph (c), Federal Acquisition Regulation (FAR) clause 52.232-7, Payments under Time-and-Materials and Labor-Hour Contracts (Dec 2002), if at any time the Contractor has reason to believe that the hourly rate payments and material costs that will accrue in performing this contract in the next succeeding 30 days, if added to all other payments and costs previously accrued, will exceed 85 percent of the ceiling price in the Schedule, the

Contractor shall notify the Contracting Officer giving a revised estimate of the total price to the Government for performing this contract with supporting reasons and documentation.

2. Period of Performance

2.1 The period of performance for the proposed task order will be one (1) twelve-month base period and one (1) three (3) month option periods as follows:

Base Period	12 months (TBD)
Option Period 1	3 months (beginning after the Base Period) (TBD)

3. Place of Performance

3.1 The place of performance will be at the Contractor's facilities, at the Department of Homeland Security (DHS) Science & Technology Directorate (S&T) Transportation Security Laboratory (TSL) located at the William J. Hughes Technical Center, Atlantic City, New Jersey. Some work may be required at vendor (systems vendors to the Government) facilities or other locations.

4. Government Furnished Information (GFI), Equipment (GFE) and Property (GFP)

4.1 DHS-Furnished Information: The Government will provide certain DHS information, materials, and forms unique to DHS to the Contractor to facilitate the support of the work effort.

4.2 DHS-Furnished Facilities, Supplies, Services and Property: The Government will provide the contractor with facilities, test plans, test bags, additional test articles, explosives and concealments, test database, and relevant documents/reports, such as those related to historical threat data, industry statistics, and program area operations (cargo/checked bag) to the extent these data/reports are available and reside with the TSL.

4.3 It is not foreseen that other DHS property will be provided to the Contractor. In the event that other property is provided to the Contractor to facilitate the performance of this work effort, DHS will maintain property records.

4.4 The Contractor may be requested to purchase some items in support of this work effort. Before purchasing any individual item equal to or exceeding \$500.00 that is required to support technical tasks performed pursuant to this SOW, the contractor shall obtain the DHS S&T Technical Representative's prior written consent. The DHS S&T Technical Representative may lower or raise the aforementioned \$500.00 threshold at his/her discretion and on written notice to the contractor. If the DHS S&T Technical Representative consents to such purchase, such item will become the property of DHS. The contractor shall maintain any such items according to currently existing property accountability procedures. The DHS S&T Technical Representative will determine the final disposition of any such items. No purchases over \$500.00 are anticipated.

5. Language Requirement

5.1 Contractor personnel shall have sufficient English language proficiency to perform technical services.

6. Travel

6.1 All travel performed and all travel costs claimed shall be in accordance with the Government's Federal Travel Regulation (FTR) and the task order. The Government shall approve travel in advance and supporting documentation shall be provided for costs claimed. Allowable and substantiated travel costs will be reimbursed.

6.2 In accordance with the FTR, local travel costs authorized include, but are not limited to, the following: transportation costs to reach destination, such as cab fare or mileage and parking fees.

6.3 In accordance with the FTR, business travel costs (non-local) authorized include, but are not limited to, the following: airfare; lodging; meals and incidental expenses ("M&IE"); car rental (includes refueling) and ground transportation to and from airport. Transportation to and from airport via personal vehicle includes associated mileage and parking fees. Unless approved in advance, lodging and M&IE shall not exceed GSA Per Diem rates.

6.4 In accordance with the FTR, receipts shall be provided for each incidental expense incurred, which exceeds \$75.00. Incidental expenses apply to both local and business travel, though likelier to occur while on business travel. (Example of an incidental expense on business travel would be cab fare incurred to and from airport.) Lodging and transportation expenses incurred to reach business destination are not considered incidental expenses. If it is impracticable to furnish said receipts in any instance as required by the FTR, the failure to do so must be fully explained. Mere inconvenience in the matter of taking receipts will not be considered.

7. Work Hours

7.1 Total work hours in a month are defined as hours expended by the Contractor in performing work under the task order. The Contractor shall not bill the Government for sick leave, vacation, holidays, jury duty, military leave or any other type of administrative leave.

7.2 When the Government requires and approves the Contractor to work additional hours in a month, including Saturdays, Sundays and Federal holidays, the Contractor shall be paid in accordance with the GSA labor rates to include any discounts contained in the Price Schedule. The Government will not pay a premium on labor rates for additional hours worked.

7.3 Unless otherwise required and approved by the Government, the Contractor shall follow Government procedures for any unscheduled shutdown of Government facilities outside of or during normal business hours in cases warranted by weather conditions, security issues, or other Government-identified emergency health and safety evacuation.

8. Contract Administration

8.1 The Contracting Officer is the only person authorized to approve changes to any of the terms and conditions of this contract. In the event the Contractor effects any changes at the direction of any person other than the Contracting Officer, the changes will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in costs incurred as a result thereof. The Contracting Officer shall be the only individual authorized to accept nonconforming work, waive any requirement of the contract, or to modify any term or condition of the contract. The Contracting Officer is the only individual who can legally obligate Government funds. No cost chargeable to the proposed contract can be incurred before receipt of a fully executed contract, which includes any subsequent contract modifications or other specific written authorization from the Contracting Officer.

Contracting Officer Information

Kevin C. Dillon
Department of Homeland Security
Office of Procurement Operations
Transportation Security Laboratories
Building 315
Atlantic City International Airport
Atlantic City, NJ 08405
Office: (b)(2) (b)(6)
Fax: (b)(2) (b)(6)

8.2 Invoice Submission. The Contractor shall submit an original invoice electronically, including any required back-up documentation within five (5) days of completion of monthly services to the Contracting Officer Technical Representative (COTR) with a courtesy copy provided concurrently to the Contracting Officer (CO). **See HSAR 3052.242-72 Contracting Officer's Technical Representative (Dec 2003) at Paragraph 18 below for the COTR's email address.** Upon receipt of invoice, the COTR, within five (5) business days, will ensure sufficiency and certify inspection and acceptance of services on Department of Homeland Security (DHS) Form 700-21 "Material Inspection and Receiving Report" then forward the completed DHS Form 700-21 with invoice and any applicable back-up documentation electronically to the CO for approval (unless invoice approval otherwise re-delegated to the COTR by the CO). The COTR will maintain copies of all invoices, back-up documentation, and completed DHS Form 700-21 in the official COTR file.

In parallel, the Contractor shall submit a copy of the invoice via e-mail to SAT.Invoice.Consolidation@dhs.gov & a hard copy to the following address:

Invoices shall be mailed to the following address:

DHS ICE
Burlington Finance Center
PO Box 1000
Williston, Vermont 05495-1000
Attn: S&T Division OPO

Department of Homeland Security
Office of Procurement Operations
Transportation Security Laboratories
Building 315
Atlantic City International Airport
Atlantic City, NJ 08405

8.3 To be deemed sufficient, each invoice must contain and correctly cite the following information in accordance with the Prompt Payment clause contained in the Contractor's GSA prime contract, (1) task order number being invoiced against; (2) the Contractor's business name and address exactly as it appears in the task order; (3) a company specific invoice number; (4) the Contractor's electronic funds transfer information (if applicable); (5) amount billed for by contract line item number (CLIN) formatted in a manner that mirrors the Price Schedule; (6) assignment of claims information (if applicable); (7) labor category, labor rate, site location, number of labor hours worked, and total for each site and all sites combined (rates must reflect those contained in the Price Schedule including discount); (8) Tax identification Number (TIN); (9) period services were performed; (10) procuring activity; and (11) point of contact, telephone number, and email address.

8.4 Invoices shall reflect any cost incurred with respect to previously approved travel expense identifying local or business (TDY) travel; description/purpose of travel, include dates; staff name(s); total travel amount for staff member per trip; lodging and transportation costs including Per Diem rate, and total monthly amount for all staff travel.

8.5 The Contractor's final invoice shall be identified as such and shall list all other invoices previously submitted under this task order.

9. Implementation of Executive Order (EO) 12334 Terrorist Financing

9.1 The Contractor is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. It is the legal responsibility of the Contractor to ensure compliance with these Executive Orders and laws.

10. Disclosure of Information

10.1 Contractors are reminded that information furnished under this solicitation may be subject to disclosure under the Freedom of Information Act (FOIA). Therefore, all items that are confidential to business, or contain trade secrets, proprietary, or personnel information must be clearly marked. Marking of items will not necessarily preclude disclosure when the U.S. Office of Personnel Management (OPM or The Government) determines disclosure is warranted by FOIA. However, if such items are not marked, all information contained within the submitted documents will be deemed to be releasable.

10.2 Any information made available to the Contractor by the Government must be used only for the purpose of carrying out the provisions of this task order and must not be divulged or made known in any manner to any person except as may be necessary in the performance of the task order.

10.3 In performance of this task order, the Contractor assumes responsibility for protection of the confidentiality of Government records and must ensure that all work performed by its subcontractors shall be under the supervision of the Contractor or the Contractor's responsible employees.

10.4 Each officer or employee of the Contractor or any of its subcontractors to whom any Government record may be made available or disclosed must be notified in writing by the Contractor that information disclosed to such officer or employee can be used only for a purpose and to the extent authorized herein, and that further disclosure of any such information, by any means, for a purpose or to an extent unauthorized herein, may subject the offender to criminal sanctions imposed by 19 U.S.C. 641. That section provides, in pertinent part, that whoever knowingly converts to their use or the use of another, or without authority, sells, conveys, or disposes of any record of the United States or whoever receives the same with intent to convert it to their use or gain, knowing it to have been converted, shall be guilty of a crime punishable by a fine of up to \$10,000, or imprisoned up to ten years, or both.

11. Section 508 Compliance

11.1 Section 508 refers to Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d). Section 508 assessments are required of all systems and are intended to ensure that individuals with disabilities have comparable access to and use of information and data comparable to the access provided to individuals without disabilities (unless this would pose an undo burden on the Federal Agency). The assessment is not to include physical access at any defined-benefit technology solution-related site. The 508 assessment shall be performed by OPM. The successful Contractor must make accessible to the Government, or its designee, information systems residing in the Contractor's (or as appropriate sub-Contractor's) facilities that support the operations and assets of the Government as part of this task order, so that the 508 assessment may be performed.

11.2 All Electronic and Information Technology (EIT) procured through this task order must meet the applicable accessibility standards at 29 USC 794d and 36 CFR 1194, unless an exception to this requirement exists as determined by the Government. See 29 USC 794d at <http://www.section508.gov/index.cfm?Fuseaction=Content&ID=12>, and 36 CFR 1194 implementation Section 508 of the Rehabilitation Act of 1973, as amended, at http://www.access-board.gov/sec508/508_standards.htm - PART 1194).

The following standards are applicable to this procurement:

a) [provided at time of award]

NOTE: The 508 standards do not require the installation of specific accessibility-related software or the attachment of an assistive technology device, but require that the EIT be compatible with such software and devices so that it can be made accessible if so required by the agency in the future.

12. Removal of Contractor Employees

12.1 The Contracting Officer may require dismissal from work of those Contractor employees which he/she deems incompetent, careless, insubordinate, unsuitable or otherwise objectionable, or whose continued employment he/she deems contrary to the public interest or inconsistent with the best interest of national security. The Contractor must fill out, and cause each of its employees on the contract work to fill out, for submission to the Government, such forms as may be necessary for security or other reasons.

13. Security Requirements

13.1 Identification/Building Pass

13.1.1 The Contractor shall coordinate with the COTR to assure that any Contractor employee requiring access to the DHS offices has a Contractor identification/building pass before the employee enters on duty under the task order. Personnel designated by the COTR shall complete appropriate forms specified by the DHS Office of Security for security clearance requirements. The Contractor shall see that all passes are returned to the Government as employees are dismissed, terminated or when the need for the employee to have access to DHS offices ceases.

13.2 Security Clearance Requirements

13.2.1 DHS has determined that performance of this task order requires that the Contractor, subcontractor(s), vendor(s), etc. (hereafter included in the term Contractor), require access to classified National Security Information (herein known as classified information) and sensitive but unclassified (SBU) information. All Contractor personnel are required to have SECRET clearances.

13.2.2 If classified work is required under this work effort, the Government will provide specific guidance to the Contractor as to which work will be conducted in a classified manner and at which classification level. The Contractor shall also adhere to other applicable Government orders, guides and directives pertaining to classified or confidential work.

13.2.3 Security Requirements:

52.204-2 Security Requirements.

As prescribed in [4.404\(a\)](#), insert the following clause:

Security Requirements (Aug 1996)

(a) This clause applies to the extent that this contract involves access to information classified “Confidential,” “Secret,” or “Top Secret.”

(b) The Contractor shall comply with—

(1) The Security Agreement ([DD Form 441](#)), including the *National Industrial Security Program Operating Manual* (DoD 5220.22-M); and

(2) Any revisions to that manual, notice of which has been furnished to the Contractor.

(c) If, subsequent to the date of this contract, the security classification or security requirements under this contract are changed by the Government and if the changes cause an increase or decrease in security costs or otherwise affect any other term or condition of this contract, the contract shall be subject to an equitable adjustment as if the changes were directed under the Changes clause of this contract.

(d) The Contractor agrees to insert terms that conform substantially to the language of this clause, including this paragraph (d) but excluding any reference to the Changes clause of this contract, in all subcontracts under this contract that involve access to classified information.

(e) Conflict of Interest/Certifications. The Contractor’s staff on this contract is required to certify in writing that they do not possess a conflict of interest in the outcome of task activities or data deliverables.

(f) Reporting Requirements – All reports generated shall, at minimum, be security sensitive, protected under 49 CFR Part 1520, and may be classified, as determined by TSL and appropriate classification guidelines. The contractor shall handle all documents in a manner appropriate to its classification level.

(End of clause)

13.2.4 The Contractor shall possess a facility security clearance or demonstrate the ability to obtain a security clearance. As such, the Contractor shall comply with DD Form 254.

13.3 Suitability Determination

13.3.1 DHS has and will exercise full control over granting, denying, withholding or terminating unescorted Government facility and/or sensitive Government information access for Contractor employees, based upon the results of a background investigation. DHS may, as it deems appropriate, authorize and make a favorable entry on duty (EOD) decision based on preliminary security checks. The favorable EOD decision would allow the employees to commence work temporarily prior to the completion of the full investigation. The granting of a favorable EOD decision shall not be considered as assurance that a full employment suitability authorization will follow as a result thereof. The granting of a favorable EOD decision or a full employment suitability determination shall in no way prevent, preclude, or bar the withdrawal or termination of any such access by DHS, at any time during the term of the task order. No employee of the Contractor shall be allowed unescorted access to a Government facility without a favorable EOD decision or suitability determination by the DHS Office of Security. Contract employees assigned to the task order not needing access to sensitive DHS information or recurring access to DHS facilities will not be subject to security suitability screening.

13.3.2 Contract employees awaiting an EOD decision may begin work on the task order provided they do not access sensitive Government information. Limited access to Government buildings is allowable prior to the EOD decision if the Contractor is escorted by a Government employee. This limited access is to allow Contractors to attend briefings, non-recurring meetings, and begin transition work.

13.4 Background Investigations

13.4.1 Contract employees (to include applicants, temporaries, part-time, and replacement employees) under the task order, needing access to sensitive information, shall undergo a position sensitivity analysis based on the duties each individual will perform on the task order. The results of the position sensitivity analysis shall identify the appropriate background investigation to be conducted. All background investigations will be processed through the DHS Office of Security. Prospective Contractor employees shall submit the following completed forms to the DHS Office of Security through the COTR no less than 30 days before the starting date of the task order or 30 days prior to entry on duty of any employees, whether a replacement, addition, subcontractor employee or vendor:

1. Standard Form 85P, "Questionnaire for Public Trust Positions"
2. FD Form 258, "Fingerprint Card" (2 copies)
3. Conditional Access to Sensitive But Unclassified Information Non-Disclosure Agreement
4. Disclosure and Authorization Pertaining to Consumer Reports Pursuant to the Fair Credit Reporting Act

13.4.2 Required forms will be provided by DHS at the time of award of the task order. Only complete packages will be accepted by the DHS Office of Security. Specific instructions on submission of packages will be provided upon award of the task order.

13.4.3 Be advised that unless an applicant requiring access to sensitive information has resided in the US for three of the past five years, the Government may not be able to complete a satisfactory background investigation. In such cases, DHS retains the right to deem an applicant as ineligible due to insufficient background information.

13.4.4 The use of Non-U.S. citizens, including Lawful Permanent Residents (LPRs) is not permitted in the performance of this task order for any position that involves access to or development of any DHS IT system. DHS will consider only U.S. Citizens and LPRs for employment on this task order. DHS will not approve LPRs for employment on this task order in any position that requires the LPR to access or assist in development, operation, management or maintenance of DHS IT systems. By signing this task order, the Contractor agrees to this restriction. In those instances where other non-IT requirements contained in the task order can be met by using LPRs, those requirements shall be clearly described.

13.5 Continued Eligibility

13.5.1 If a prospective employee is found to be ineligible for access to Government facilities or information, the COTR will advise the Contractor that the employee shall not continue to work or to be assigned to work under the task order.

13.5.2 The DHS Office of Security may require drug screening for probable cause at any time and/or when the Contractor independently identifies, circumstances where probable cause exists.

13.5.3 DHS reserves the right and prerogative to deny and/or restrict the facility and information access of any Contractor employee whose actions are in conflict with the standards of conduct, 5 CFR 2635 and 5 CFR 3801, or whom DHS determines to present a risk of compromising sensitive Government information to which he or she would have access under this task order.

13.5.4 The Contractor will report any adverse information coming to their attention concerning Contractor employees under the task order to the DHS Office of Security. Reports based on rumor or innuendo should not be made. The subsequent termination of employment of an employee does not obviate the requirement to submit this report. The report shall include the employee's name and social security number, along with the adverse information being reported.

13.5.5 The DHS Office of Security must be notified of all terminations/resignations within five days of occurrence. The Contractor will return any expired DHS issued identification cards and building passes, or those of terminated employees to the COTR. If identification card or building pass is not available to be returned, a report must be submitted to the COTR, referencing the pass or card number, name of individual to whom issued, the last known location and disposition of the pass or card.

13.6 Employment Eligibility

13.6.1 The Contractor must agree that each employee working on this task order will have a Social Security Card issued and approved by the Social Security Administration. The Contractor shall be responsible to the Government for acts and omissions of his own employees and for any Subcontractor(s) and their employees.

13.6.2 Subject to existing law, regulations and/or other provisions of this task order, illegal or undocumented aliens will not be employed by the Contractor, or with this task order. The Contractor will ensure that this provision is expressly incorporated into any and all subcontracts or subordinate agreements issued in support of this task order.

13.7 Security Management

13.7.1 The Contractor shall appoint a senior official to act the corporate security officer. This individual should be the Program Manager. This responsibility is not to be separately billed under the contract. The individual will interface with the DHS Office of Security through the COTR on all security matters, to include physical, personnel, and protection of all Government information and data accessed by the Contractor.

13.7.2 The COTR and the DHS Office of Security shall have the right to inspect the procedures, methods, and facilities utilized by the Contractor in complying with the security requirements under this task order. Should the COTR determine that the Contractor is not complying with the security requirements of this task order, the Contractor will be informed in writing by the contracting officer of the proper action to be taken in order to effect compliance with such requirements.

13.8 Information Technology Clearance

13.8.1 When sensitive Government information is processed on Department telecommunications and automated information systems, the Contractor agrees to provide for the administrative control of sensitive data being processed and to adhere to the procedures governing such data as outlined in *DHS IT Security Program Publication DHS MD 4300.Pub*. Contractor personnel must have favorably adjudicated background investigations commensurate with the define sensitivity level.

13.8.2 Contractors who fail to comply with Department security policy are subject to having their access to Department IT systems and facilities terminated, whether or not the failure results in criminal prosecution. Any person who improperly discloses sensitive information is subject to criminal and civil penalties and sanctions under a variety of laws (e.g., Privacy Act).

13.8.3 Information Technology Security Training and Oversight:

13.8.3.1 All Contractor employees using Department automated systems or processing Department sensitive data will be required to complete security awareness training. This training will be provided by the appropriate component agency of DHS.

13.8.3.2 Contractors who are involved with the management, use, or operation of any IT systems that handle sensitive information within or under the supervision of the Department shall receive periodic training at least annually in security awareness and accepted security practices and systems rules of behavior. Department Contractors with significant security responsibilities shall receive specialized training specific to their security responsibilities annually. The level of training shall be commensurate with the individual's duties and responsibilities and is intended to promote a consistent understanding of the principles and concepts of telecommunications and IT systems security.

13.8.3.3 All personnel who access Department information systems will be continually evaluated while performing these duties. Supervisors should be aware of any unusual or inappropriate behavior by personnel accessing systems. Any unauthorized access, sharing of passwords, or other questionable security procedures should be reported to the local DHS Office of Security or Information Systems Security Officer (ISSO).

14. Non-Disclosure of Protected Critical Infrastructure Information

14.1 The Contractor and the Government agree to implement an interim rule promulgating new regulations at Title 6 Code of Federal Regulations Section 29.8(c) to govern procedures for handling critical infrastructure information. The regulations detailed in the interim rule, which was effective upon publication pursuant to Section 808 of the Congressional Review Act, were promulgated pursuant to Title II, Section 214 of the Homeland Security Act of 2002, known as the Critical Infrastructure Information Act of 2002 (CIIA Act).

14.2 The Contractor shall not request, obtain, maintain or use Protected CII without a prior written certification from the Protected CII Program Manager or a Protected CII Officer that conforms to the requirements of Section 29.8(c) of the regulations in the Interim Rule.

14.3 The Contractor shall comply with all requirements of the Protected CII (PCII) Program set out in the CII Act, in the implementing regulations published in the Interim Rule, and in the PCII Procedures Manual as they may be amended from time to time, and shall safeguard Protected CII in accordance with the procedures contained therein. The Contractor shall ensure that each of its employees, consultants and subcontractors who work on the PCII Program have executed Non-Disclosure Agreements (NDAs) in a form prescribed by the PCII Program Manager. The Contractor shall ensure that each of its employees, consultants and subcontractors has executed a NDA and agrees that none of its employees, consultants or subcontractors will be given access to Protected CII without having previously executed a NDA.

15. Standards of Conduct at Government Installations

15.1 The Contractor shall be responsible for maintaining satisfactory standards of employee competency, conduct, appearance, and integrity and shall be responsible for taking such disciplinary action with respect to his employees, as may be necessary. The Contractor is also responsible for ensuring that his employees do not disturb paper on desks, open desk drawers or cabinets or use Government telephones, except as authorized.

15.2 If due to the fault or neglect of the Contractor, his agents, or employees, any Government property, equipment, stock, or supplies are lost or damaged during performance of this task order, the Contractor shall be responsible for such loss or damage and the Government, at its option, may either require the Contractor to replace all property or to reimburse the Government for the full value of the lost or damaged property.

15.3 The Contractor is responsible for maintaining assigned space(s) in a clean and orderly fashion during the course of this task order. Furniture as may be assigned to the space(s) shall remain in place and not removed from areas. All telephones are for conducting official Government business only. The Contractor is responsible for exercising control over all supplies, materials, and equipment of a personal or company nature.

16. Public Release of Information

16.1 Publicity releases in connection with this task order shall not be made by the Contractor unless prior written approval has been received from the Contracting Officer.

17. Labor Categories/Qualifications

17.1 The Contractor shall provide, at a minimum, the following personnel positions for work to be performed under this task order as it comports to the specific labor category description in their GSA contract possessing the following qualifications:

17.1-1. CLERICAL – Provides secretarial/clerical support for program manager, supervisor and office staff members. Performs varied clerical and secretarial duties requiring knowledge of office routine and an understanding of the organization, programs, and procedures related to the work of the office. Uses own judgment and initiative to determine the approach or action to be taken in non-routine situations and in interpreting and adapting guidelines. Has above average communication skills, both written and oral. Maintains a close and highly responsive relationship to the day-to-day activities of the office and works fairly independently, receiving a minimum of detailed supervision and guidance.

QUALIFICATIONS: An associate's degree from an accredited college or university or equivalent degree. Study shall have included specialized courses in secretarial science. Shall have at least one year of experience in performing secretarial tasks in support of engineering and

scientific activities **OR** shall have at least 3 years experience in performing secretarial task in support of engineering, scientific or professional activities.

17.1-2. COMPUTER SYSTEMS ANALYST - Performs systems engineering function primarily with respect to computer functional allocations, software development, and hardware development. Serves as computer programmer analyst, performs development and application of computer software, data analysis, and data processing. Knowledgeable in government ADP standards, policies, modern communications networks, operating systems, World Wide Web applications, and higher level computer languages. Has experience in computer systems interfaces. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor of Science degree or higher from an accredited college or university in computer system or software engineering and 5 years experience in software development. Experience shall demonstrate the ability to perform software system analysis, monitor software development according to relevant government standards and write software development assessments.

17.1-3. CONTRACT MANAGER - Serves as the primary contact point for work related to this contractual effort. The contract manager shall be capable of the following: Overall contract and task management, performing planning and scheduling, progress reporting, cost control, organization and manpower planning, contract administration, developing work breakdown structures, performance analysis, and technical risk analysis, financial planning, quality assurance, and quality control on all submitted deliverables. Keeps customer informed of ongoing technical/administrative concerns, proficient in the use of personal computers, and has working knowledge of commercial project management software programs. Is proficient in project management skills, including cost and scheduling, contracting, budgeting, risk analysis, leadership, quality, and earned value analysis.

QUALIFICATIONS: A master's degree in either a business, technical or engineering field from an accredited college or university and 5 years of program management experience in planning, managing and implementing projects/programs of which years shall be managing complex transportation security research, development, test and evaluation contracts or related activities. Shall have demonstrated knowledge and understanding of national security systems. Shall have PMI or equivalent certification in project management.

17.1-4. DOCUMENTATION SPECIALIST - Provides word processing, graphic arts or technical writing support in the preparation of technical and administrative publications and presentations associated with engineering and scientific research, development, testing, studies, and related activities. Performs moderately complex word processing and graphics tasks requiring considerable classroom or on-the-job training, or performs technical writing tasks requiring comprehensive technical knowledge of writing and editing practices and procedures. Provides direction to junior documentation specialists and interfaces directly with the task originator regarding specific work assignments.

QUALIFICATIONS: An Associates degree from an accredited college or university. Study must have included courses in word processing, technical writing/editing, graphic arts, and presentations. Must be capable of performing moderately complex word processing, technical writing and editing, graphic arts, and visual presentations associated with aircraft safety research, development, test, and evaluation activities with full effectiveness after a brief orientation period **AND** shall have at least 5 years of word processing, technical writing/editing, graphic arts, and visual presentation experience in the aircraft safety research engineering or related research scientific fields **OR** shall have at least 10 years of word processing, technical writing/editing, graphic arts, and visual presentation experience in the transportation security research engineering or related fields.

17.1-5. ENGINEER I - Performs engineering analyses of security related systems to determine potential for further development, production, interface to other systems, and usefulness in the intended environment. Requires no more than moderate supervision. Performs test assembly, conducts test, collects test data, witnesses test performance; prepares test/program assessment reports. Engineer shall be capable of developing work breakdown structures, identification of critical path elements to project accomplishment, and tracking of project activities. Has good communication skills is able to write with moderate supervision project documents, including project plans, test plans and procedures, data analysis reports, project final reports. Has experience in data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university in Engineering. Shall have 2 years experience that demonstrates knowledge of System, Electrical/Electronics engineering discipline. Knowledge is defined as the comprehensive, in-depth knowledge of systems engineering and advanced technology development. Shall have security, physical security, security sensor, or explosive detection systems or related engineering experience demonstrating the ability to work with complex issues related to design, development, and test and evaluation.

17.1-6. MECHANICAL ENGINEER - Performs engineering design and analyses of complex security related systems to determine potential for further development, production, and interface to other systems, and usefulness in the homeland security environment. Requires little or no supervision. Writes test plans and procedures; conducts test, collects test data, and prepares test/program assessment reports. Engineer shall be capable of developing work breakdown structures, identification of critical path elements to project accomplishment, and tracking of project activities. Has above average communication skills is able to write with little supervision project documents, including project plans, test plans and procedures, data analysis reports, project final reports. Has experience in system automation, data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university in Engineering. Shall have 6 years experience that demonstrates a professional knowledge of System, Electrical/Electronics engineering discipline. Professional knowledge is defined as the

comprehensive, in-depth knowledge of systems engineering and advanced technology development. Shall have security, physical security, security sensor, or explosive detection systems or related engineering experience demonstrating the ability to work with complex Issues related to design, development, and test and evaluation.

17.1-7. ENGINEER III – Performs engineering design and analyses or highly complex security and security related systems to determine potential for further development, production, and interface to other systems, and usefulness in the homeland security environment. Requires no supervision. Reviews and comments on test plans and procedures; conducts tests, collects test data, prepares test/program assessment reports. Shall be capable of developing work breakdown structures, identification of critical path elements to project accomplishment, and tracking of project activities. Has good communications skills, is able to write with no supervision project documents including project plans, test plans and procedures, data analysis reports, and project final reports. Has experience in system automation, data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university in Engineering. Shall have 10 years experience that demonstrates a professional knowledge of System, Electrical/Electronics engineering discipline. Professional knowledge is defined as the comprehensive, in-depth knowledge of systems engineering and advanced technology development. Shall have security, physical security, security sensor, or explosive detection systems or related engineering experience demonstrating the ability to work with complex issues related to design, development, and test and evaluation.

17.1-8. ENGINEERING TECHNICIAN I: Provides technical assistance in engineering and scientific research, development, testing and related activities. Performs simple tasks under close supervision or from detailed procedures in process or completion. Performs at this level on or on one or a combination of the following tasks (not limited to :)

- Construct simple equipment or parts.
- Service instruments or equipment
- Conduct a variety of standardized tests;
- May prepare test specimens
- Set up equipment

QUALIFICATIONS: Successful completion of study from an accredited college or university leading to an associate of applied Science or equivalent degree, or from an accredited technical school leading to a mechanic/technician rating **OR** shall have at least 7 years of technical experience. Must have experience that demonstrates comprehensive knowledge on solving complex technical problems associated with engineering and scientific activities. Shall have at least 3 years of demonstrated experience using a variety of tools and test equipment.

17.1-9. ENGINEERING TECHNICIAN II. Provides technical assistance in engineering and scientific research, development, and testing and related activities. Performs simple tasks under

close supervision or from detailed procedures in process or completion. Performs at this level on or on one or a combination of the following tasks (not limited to :)

- Construct simple equipment or parts.
- Service instruments or equipment
- Conduct a variety of standardized tests;
- May prepare test specimens
- Set up equipment

QUALIFICATIONS: Successful completion of study from an accredited college or university leading to an associate of applied Science or equivalent degree, or from an accredited technical school leading to a mechanic/technician rating. Experience that demonstrates comprehensive knowledge on solving complex technical problems associated with engineering and scientific activities. Shall have at least 6 years of demonstrated experience using a variety of tools and test equipment.

17.1-10. EXPLOSIVES SPECIALIST - Provides expertise in the composition and formulation of military, commercial and improvised types of explosives and improvised explosive devices (IEDs), including ability to design and construct IED configurations that may be concealed within passenger bags, on personnel, or in other medium that could lead to placement on an aircraft. Applicant is well versed in explosives effects mitigation, safe separation distances, and risk management related to operations involving energetic materials. Requires some supervision. Has experience with non-destructive inspection (NDI) technologies and their application to detecting explosive materials. Familiar with chemical formulations and properties related to NDI technologies.

QUALIFICATIONS: Successful completion of either Naval School, Explosives Ordnance Disposal, Indian Head, MD; or Hazardous Devices School, Huntsville, AL; or equivalent specialized instruction and training on the handling and safe use of explosive and energetic materials. Shall have at least 5 years in the explosives field, which demonstrates a thorough knowledge of military, commercial, and improvised types of explosives and improvised explosive devices (IEDs).

17.1-11. JUNIOR HUMAN FACTORS ENGINEER I: Assists in the conduct of human-in-the-loop experiments in laboratory and field environments, including writing and reviewing test and evaluation plans; assembling test bag and image sets; drafting questionnaires; collecting test data; assisting in preparing test and evaluation reports; and briefing government staff on current activities. Assists in identifying system design features and characteristics that may adversely affect security equipment operators and maintainers. Assists in the evaluation of potential human-system performance improvements, including assisting in the conduct of usability assessments, changes in equipment design, operating procedures, staffing requirements, personnel selection, and training. Assists in engineering design and analyses of security equipment to determine potential for further development, production, and interface improvements and usefulness in the homeland environment. Has good verbal and written communication skills. Has moderate experience in data collection and reporting and a limited knowledge of data analysis. Requires no more than moderate supervision. Proficient in the use

of personal computers and has working knowledge of commercial software programs, especially Microsoft Office Suite products, and other software on TSA workstations.

QUALIFICATIONS: A bachelor's degree in human factors or experimental psychology from an accredited college or university and at least 3 years related work experience. **OR** A master's degree in human factors or experimental psychology from an accredited college or university.

17.1-12. JUNIOR ENGINEER - Performs engineering/scientific design and analyses work, and provides engineering support in developing/evaluating specific research areas associated with evolving security technologies. Receives technical guidance, as required, from supervisor or higher level engineer. Assists in the preparation of technical plans, reports and technology studies; reviews and comments on past and present work related to specific research areas; prepares briefing material on ongoing activities; attends meetings with customer and other relevant contractor personnel in order to better understand engineering issues related to transportation security.

QUALIFICATIONS: A Bachelor of Science in engineering/science from an accredited college or university. Shall have at least 1 year of research engineering/scientific experience; **AND** the demonstrated research experience gained through projects, programs, and education, that directly applies to the application of advanced transportation security research concepts, principles, practices, and techniques of research engineering in transportation security, electrical/electronics, mechanical, and materials.

17.1-13. JUNIOR PHYSICIST - Performs studies and analyses related to the development of security technologies. Assists in planning, and executes experiments/tests related to the physics of explosives and weapons detection, including recording and analysis of data. Requires moderate supervision. Contributes to comprehensive technical reports, data reports and other publications. Performs simple tasks with moderate supervision or from detailed TSA procedures. Has above average communication skills and is able to write project documents with moderate supervision.

QUALIFICATIONS: A Bachelor of Science degree in physics from an accredited college or university with 2 years experience in experimental or applied physics. Years of experience may not substitute for education.

17.1-14. PHYSICIST - Performs research, design, development, analysis, test and evaluation of complex security systems. Determines potential of physics approaches for further development, defines opportunities to interface various technologies/systems, and assesses usefulness of technologies in the homeland security environment. Requires little or no supervision. Writes experiment/test plans and procedures, conducts test, collects test data, and prepares technical reports. Must be able to perform a variety of complex laboratory analytical procedures. Has experience in automated data collection, analysis, and presentation. Proficient in the use of personal computers and has working knowledge of commercial software programs. Prepares and gives presentations at conferences and other meetings.

QUALIFICATIONS: A Master's Degree or higher degree in physics from an accredited college or university. Shall have 4 years experience that demonstrates a professional knowledge of physics, and/or development of physics-based systems. Professional knowledge is defined as the comprehensive, in-depth knowledge of advanced technology development. Years of experience may not substitute for education.

17.1-15. PRINCIPAL SCIENTIST / SR. PHYSICIST - Serves as the senior technical lead for the work related to this contractual effort. Responsible for planning, executing, and documenting various aspects of research, development, testing and analysis of security systems. Responsible for assembling the technical team required for the project. Prepares technical plans and reports; reviews and comments on past and present work related to specific research areas; briefs customer on ongoing activities; meets with customer and other relevant personnel as required. Prepares and gives presentations at professional conferences and other meetings.

QUALIFICATIONS: A Ph.D. degree in a natural science (e.g. physics, chemistry, biology) or engineering from an accredited college or university in engineering/science and the demonstrated research experience gained through projects, programs, and education that directly apply to the application of advanced transportation security concepts, principles, practices, and techniques. Years of experience may not substitute for education.

17.1-16. PROGRAM MANAGER – A program manager shall be capable of the following: Performing planning and scheduling, progress reporting, cost control, organization and manpower planning, developing work breakdown structures, performance analysis, technical risk analysis, financial planning, quality assurance, and quality control on all submitted deliverables. Keeps customer informed of ongoing technical/administrative concerns, possessing excellent communication skills, both oral and written.

QUALIFICATIONS: A master's degree in either a business, technical or engineering field from an accredited college or university and 7 years of program management experience in planning, managing and implementing projects/programs of which 2 years shall be managing complex transportation security research, development, test and evaluation contracts or related activities AND Shall have PMI or equivalent certification in project management. Shall have demonstrated knowledge and understanding of national security systems.

17.1-17. RESEARCH CHEMIST I. Responsible for executing, and documenting various aspects of testing and analysis associated with the development of Security related systems. Must be able to test and/or evaluate a number of commercial and prototype explosives detection systems. Candidate shall possess sufficient skills to perform parametric testing and evaluation of candidate systems to determine parameters such as lower limit of detection, sensitivity, selectivity, dynamic range or other instrument performance characteristics. Chemist must be capable of performing literature searches and assessing the current state of the art in approaching any research program. Must be able to write, review, and/or comment on test plans and procedures. Chemist must be able to perform a variety of routine laboratory analytical procedures, including (4 of 7) colorimetric analysis, gas chromatography, liquid

chromatography, thermal gravimetric analysis, differential scanning calorimetry, infrared spectroscopy and mass spectroscopy. Has good communication skills and is able to write project documents with little supervision, including project plans, test plans and procedures, data analysis reports, project final reports.

QUALIFICATIONS: A Bachelor's Degree from an accredited college or university certified by the American Chemical Society or equal. Shall have a minimum of 3 years laboratory experience in a chemical analysis.

17.1-18. RESEARCH CHEMIST II - Responsible for executing, and documenting various aspects of testing and analysis associated with the development of Security related systems. Must be able to test and/or evaluate a number of commercial and prototype explosives detection systems. Candidate shall possess sufficient skills to perform parametric testing and evaluation of candidate systems to determine parameters such as lower limit of detection, sensitivity, selectivity, dynamic range or other instrument performance characteristics. Chemist must be capable of performing literature searches and assessing the current state of the art in approaching any research program. Must be able to write, review, and/or comment on test plans and procedures. Chemist must be able to perform a variety of routine laboratory analytical procedures, including (5 of 7) colorimetric analysis, gas chromatography, liquid chromatography, thermal gravimetric analysis, differential scanning calorimetry, infrared spectroscopy and mass spectroscopy. Has good communication skills and is able to write project documents with little supervision, including project plans, test plans and procedures, data analysis reports, project final reports. Candidate should have experience in the areas of sensor systems, MEMS, microsensors, preconcentrators, chemoselective coatings, vapor collection and trace chemical analysis methods.

QUALIFICATIONS: A Master's Degree from an accredited college or university certified by the American Chemical Society or equal. Shall have a minimum of 5 years laboratory experience in a chemical analysis or independent research.

17.1-19. SENIOR ENGINEER - Performs in-depth engineering analyses of security related systems to determine potential for further development, production, Interface to other systems, and usefulness in the homeland security environment. Witnesses test performance; prepares test/program assessment reports; briefs government staff on ongoing activities; interviews government and non-government people in order to improve system engineering knowledge. Can complete project life cycle work (planning, development, execution, termination), develop work breakdown structures, PERT/CPM critical path working knowledge, project budgets, and tracking of project activities. Has good communication skills and is able to write with little or no supervision project documents, including project plans, test plans and procedures, data analysis reports, project final reports. Has working knowledge of commercial project management software programs.

QUALIFICATIONS: A Bachelors Degree in Engineering from an accredited college or university. Shall have 10 years experience that demonstrates a professional knowledge of

Systems development and technology development. Professional knowledge is defined as the comprehensive, In-depth knowledge of systems engineering and advanced technology development.

17.1-20. SENIOR RESEARCH CHEMIST – Responsible for executing, and documenting various aspects of testing and analysis associated with the development of Security related systems. Must be able to test and/or evaluate a number of commercial and prototype explosives detection systems. Candidate shall possess sufficient skills to perform parametric testing and evaluation of candidate systems to determine parameters such as lower limit of detection, sensitivity, selectivity, dynamic range or other instrument performance characteristics. Chemist must be capable of performing literature searches and assessing the current state of the art in approaching any research program. Must be able to write, review, and/or comment on test plans and procedures. Chemist must be able to perform a variety of routine laboratory analytical procedures, including (5 of 7) colorimetric analysis, gas chromatography, liquid chromatography, thermal gravimetric analysis, differential scanning calorimetry, infrared spectroscopy and mass spectroscopy. Has good communication skills and is able to write project documents with little supervision, including project plans, test plans and procedures, data analysis reports, project final reports. Candidate must possess independent research experience and demonstrated capability in the planning and execution of research and development projects. Candidate should have experience in the areas of sensor systems, MEMS, microsensors, preconcentrators, chemoselective coatings, vapor collection and trace chemical analysis methods.

QUALIFICATIONS: A Ph.D degree from an accredited college or university certified by the American Chemical Society or equal. Shall have a minimum of 8 years laboratory experience in a chemical performing analysis or independent research.

17.1-21. TECHNICAL WRITER - Supports program activities in the areas of developing key documentation materials for the program plans, and project plans developed. Responsibilities include writing, evaluating, editing, and developing technical materials for publication. Team player with strong inter-personal and communication skills. Ability to work within project teams and towards established time lines.

QUALIFICATIONS: A Bachelor's Degree in English, Biology, Physics, Biochemistry, Chemistry or equivalent with minimum of 5-8 years related experience in technical writing. Must possess good communication skills. Background and experience with program and project management plans is a strong plus.

17.2 Although the Government believes that the above-presented labor categories are required to fulfill the requirements listed in the Statement of Work, it is open to explore other alternatives. As such, the Contractor has the option of proposing a different labor mix and skill set that it believes could meet the requirements listed in the Statement of Work. The Government reserves the right to determine the acceptability of the Contractor's alternative approach.

HSAR 3052.215-70 Key Personnel or Facilities (Dec 2003)

(a) The personnel or facilities specified below are considered essential to the work being performed under this contract and may, with the consent of the contracting parties, be changed from time to time during the course of the contract by adding or deleting personnel or facilities, as appropriate.

(b) Before removing or replacing any of the specified individuals or facilities, the Contractor shall notify the Contracting Officer, in writing, before the change becomes effective. The Contractor shall submit sufficient information to support the proposed action and to enable the Contracting Officer to evaluate the potential impact of the change on this contract. The Contractor shall not remove or replace personnel or facilities until the Contracting Officer approves the change.

The Key Personnel under this Contract are:

Contract Manager	Program Manager
Engineer III	Senior Engineer
Explosives Specialist	Senior Physicist
Physicist	Senior Research Chemist
Principal Scientist	

In the event the Contractor is proposing an alternative solution (See Section 17.2), the Contractor should provide the Government with a list of its proposed Key Personnel.

IV. Other Contract Details

1. Quarterly Reports

- a) The Contractor shall submit quarterly reports providing the following information to the CO, COTR and Servicing Security Element (SSE) on or before the fifth (5th) day following each report period. A complete listing by full name in alphabetical order with the social security number, of all contractor personnel who had access to a government facility, sensitive information and/or resources anytime during the report period (date of birth and social security number shall be omitted from CO and COTR copies of report(s). Additionally, the Contractor shall submit to the CO, COTR and SSE on or before the fifth (5th) day of each month, any employment changes made during the reporting period. Examples of such changes are terminations (to include name, SSN, hire date), and name changes. All lists must be in alphabetical order and have the name of the contractor and the contract number. The Contractor shall notify the CO and COTR within one (1) day after any employee terminated from performance on the contract.

V. Points of Contact

Contractor Points of Contact (POCs) are as follows:

- Technical POC(s) – TBD at award
- Financial POC(s) – TBD at award

The Contractor may change the individual designated as a POC upon notice to DHS S&T COTR of such change.

The DHS POCs are as follows:

- DHS Contracting Officer
Kevin Dillon
Department of Homeland Security
Transportation Security Laboratory, Contracts Division
William J Hughes Technical Center, Building 315
Atlantic City, NJ 08405
e-mail: (b)(2) (b)(6)
(b)(2) (b)(6)
- DHS Contracting Officer Technical Representative
Sharon Moore
Department of Homeland Security, Science & Technology
Transportation Security Laboratory, TSL-200
William J Hughes Technical Center, Building 315
Atlantic City, NJ 08405
e-mail: (b)(2) (b)(6)
(b)(2) (b)(6)

DHS S&T may change the individual designated as a POC upon notice to contractor of such change.

Statement of Work for the Acoustic-Based Technology Investigation Project

U.S. Department of Homeland Security Science and Technology Directorate Explosives Division PR# RSEN-10-00091

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. DHS S&T is committed to protecting the homeland, its infrastructure, and citizens from threats including those presented by Improvised Explosive Devices (IEDs).

The Transportation Security Administration's (TSA's) Office of Security Technology has an urgent need to identify and test new technologies to screen cargo commodities in drums and pails. In many cases, current technology, such as X-ray machines and Explosive Trace Detectors are not effective due to the density or chemical composition of the cargo being shipped in these containers. The purpose of this project is to identify new technologies that may narrow the existing technology gap through a market survey and attendance of technical conferences. In addition, two test and evaluation plans will be developed. One will be used for quick assessments to determine initial system capabilities and the second will be used for a more comprehensive evaluation using a wide range of test articles, container contents, and IED configurations. Lastly, test articles will be developed for each type of testing. Upon completion of this effort, the government will have all of the items necessary to provide to a contractor to conduct actual system assessments.

The purpose of this action is to provide tasking and funding to Battelle Memorial Institute to execute the tasks and fulfill the requirements listed in Section II of this document. This Statement of Work (SOW) does not include conducting any testing activities, but it does include all of the pre-testing activities such as test plan design and test article development.

II. Scope of Work

This is a new effort under an existing agreement with Battelle (contract #HSHQDC-09-F-00043). Battelle shall perform the following tasks.

A. Conduct project planning activities

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- Battelle shall schedule and host a kickoff meeting within 7 calendar days after contract award. A member of Battelle's staff shall take notes and provide the federal project monitor a copy of the minutes of the meeting. The DHS COTR will provide Battelle an overview of the project, scope, background, purpose, and general timeline of the effort. There will be sufficient time for Battelle's staff to ask questions so that they have adequate information needed to draft a project plan.
- Battelle shall draft and deliver a project plan that outlines Battelle's proposed management and technical approach to successfully complete the project. It shall also describe all of the associated tasks, a detailed schedule in MS Project broken down into relevant work breakdown structure elements, risks and risk mitigation strategies, labor categories, estimated personnel hours and cost by labor category, travel cost estimates, and material purchase estimates.

B. Conduct a Market Survey

- Battelle shall conduct a market survey to determine if any systems exist that may be used to screen various sizes and shapes of metal, plastic, and cardboard drums, barrels, and pails. In addition to surveying for existing technologies, Battelle shall also investigate new potential solutions that may be able to be developed. These potential solutions may be existing technologies used in different environments for different applications. For example, in the geophysics domain, electromagnetic tomography is used to determine continuity of subterranean water or oil reservoirs. The system provides a low-resolution image that may be useful in detecting objects within a 55 gallon drum.
- Upon completion of the market survey, Battelle shall draft a report summarizing the findings of existing or potential new technologies that can be applied to screening containers. The report shall include a brief description of the technology; maturity level; and if Commercial-off-the-Shelf (COTS) systems exist, how it is used, the basis of the technology, estimated cost, feasibility to tailor the system to the security screening domain, etc.
- Battelle shall identify conferences where new concepts, technologies, and research would be presented. The government will decide and conditionally approve attendance by Battelle staff at up to two of these conferences.

C. Test Planning

- Battelle shall draft two Test and Evaluation Plans (TEPs). The first TEP shall describe the methodology to conduct a quick assessment of a system's capability to detect false compartments and objects within a large (55 gallon) or small (5 gallon) container. The focus of this TEP would be a rapid feasibility study to determine if a more comprehensive evaluation should be pursued. It is envisioned that the test would be conducted at the vendor's site or at a site where the system is currently deployed. Test articles should be devised to be transportable where they can be fully assembled on-site (e.g., adding water to the drums), hidden objects in the containers, etc.

The second TEP shall describe a comprehensive evaluation with a wide range of (1) test

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items (i.e., different sizes and material of containers), (2) container contents (i.e., liquids, solids, and combinations), (3) densities/viscosities, and (4) IED configurations.

D. Test Item Preparation

- Upon government approval of the test plans, Battelle shall develop test articles for both the quick and comprehensive test evaluations. This includes the various sizes of containers, IED components, false walls/bottoms, items to suspend IEDs within the container, and potential jigs to vary IEDs locations within the container. In addition, Battelle shall develop a database of relevant information to be obtained during an evaluation.

E. Project Management

- Battelle shall provide all of the necessary technical, business, and administrative planning; organizing; managing; coordinating; and tracking information associated with this task.
- Battelle shall deliver a Program Status Report (PSR) as described in Section V.
- Battelle shall facilitate and participate in periodic (e.g., weekly or bi-weekly) meetings. The purpose of these meetings is to (1) review the project in terms of contract schedule, performance, and cost; (2) identify government/contractor/subcontractor interface problems; (3) assign and track action items for problem resolution; and (4) identify future risk factors, steps taken to mitigate those risks, and recommendations.

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III. Key Milestones and Deliverables

Program Element/ Project	Major Sub-Tasks	Key Milestones and Deliverables
Acoustic-Based Technology Investigation	Project Planning	<ul style="list-style-type: none"> • Conduct kickoff meeting (No Later Than [NLT] 7 Calendar Days After [CDA] Contract Award) • Deliver kickoff meeting minutes (NLT 3 CDA kickoff meeting) • Deliver a draft project plan (NLT 28 CDA contract award)
	Conduct Market Survey	<ul style="list-style-type: none"> • Deliver a draft of market survey results (NLT 60 CDA contract award) • Deliver list of technology conferences (NLT 75 CDA contract award)
	Test Planning	<ul style="list-style-type: none"> • Deliver draft quick assessment TEP (NLT 120 CDA contract award) • Deliver draft comprehensive assessment TEP (NLT 150 CDA contract award)
	Test Item Preparation	<ul style="list-style-type: none"> • Deliver draft test articles (NLT 210 CDA contract award) • Deliver draft database template (NLT 210 CDA contract award)
	Project Management	<ul style="list-style-type: none"> • Deliver draft PSR (15th of each month)

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IV. Project Timeline

Below is a summary of the tasking timeline for this effort:



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V. Other Contract Details

A. Period of Performance.

The period of performance for this SOW is 8 months from contract award date on HSHQDC-09-F-00043. DHS may give subsequent extension notices to Battelle in writing for further performance in accordance with the terms of this SOW.

B. Travel.

Travel may be required in the performance of the duties listed herein. It is anticipated that travel will consist of the attendance of two conferences throughout the duration of this effort. For the purpose of determining cost estimates, the following cities should be used: San Diego, CA and Miami, FL.

The DHS S&T Contracting Officer's Technical Representative (COTR) must approve all additional travel. All travel and other direct costs associated with the execution of the tasks indicated in this SOW will be reimbursed in accordance with the limits set forth in the Federal Travel Regulations, provided the performer provides appropriate supporting documentation.

The DHS S&T COTR and the DHS S&T Special Assistant for International Policy must approve all foreign travel in advance.

C. DHS-Furnished Information.

1. DHS will provide certain DHS information, materials, and forms unique to DHS to Battelle to support certain tasks under this SOW.
2. The DHS S&T COTR identified in this SOW shall be the point of contact (POC) for identification of any required information to be supplied by DHS.
3. Battelle will prepare any documentation according to the guidelines provided by DHS.

D. DHS-Furnished Facilities, Supplies, and Services.

If work at DHS-provided facilities is necessary for the services being performed under this SOW, such facilities will be provided at the Transportation Security Laboratory (TSL) at the William J. Hughes Technical Center. Parking facilities will be provided; however, they may not be within the compound fence. Basic facilities such as work space and associated operating requirements (e.g., phones, desks, utilities, desktop computers, and consumable and general purpose office supplies) will be provided to contractor personnel in the event that on-site work stations within TSL's office are required.

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E. Place(s) of Performance.

Battelle shall perform the work under this SOW at their Egg Harbor Township, NJ location.

F. DHS-Furnished Property.

DHS property, in the form of an external hard drive containing the most recent cargo characterization database, will be provided to Battelle. Otherwise, no additional property will be provided unless agreed in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$5,000 that is required to support technical tasks performed pursuant to this SOW, Battelle shall obtain the DHS S&T COTR's prior written consent. The DHS S&T COTR may lower or raise the aforementioned \$5,000 threshold at his/her discretion on written notice to Battelle. If the DHS S&T COTR consents to such purchase, such item shall become the property of DHS. Battelle shall maintain any such items according to currently existing property accountability procedures. The DHS S&T COTR will determine the final disposition of any such items.

G. Deliverables.

Battelle shall provide all deliverables identified in this SOW directly to the DHS S&T COTR and DHS S&T Contracting Officer with a copy of the transmittal letter to the Financial Analyst.

H. Program Status Report.

Battelle will deliver a monthly program status report to the DHS S&T COTR, DHS S&T Explosives Business Operations Manager, and DHS S&T Financial Analyst on the 15th day of each month containing metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment information of all work performed hereunder. This document will describe the previous 30 calendar days' activity, technical progress achieved against goals, difficulties encountered, recovery plans (if needed), plans for the next 30 calendar day period, and financial status.

I. Invoices.

Battelle will deliver a monthly invoice to ST.Invoicing@hq.dhs.gov on the 15th day of each month.

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J. Funding Requirements.

DHS will provide funding to Battelle Memorial Institute in accordance with DHS's appropriations and available funds.

K. Security Requirements.

1. All work performed under this SOW is unclassified unless otherwise specified by DHS.
2. If classified work is required under this SOW, DHS will provide specific guidance to Battelle as to which work will be conducted in a classified manner and at which classification level. Battelle shall also adhere to other applicable Government orders, guides and directives pertaining to classified or confidential work. This SOW may require access to information at the Secret level for National Security Information.

VI. Points of Contact

Battelle's Points of Contact (POCs) are as follows:

Technical POC

(b) (6) Program Manager
Battelle
505 King Ave.
Columbus, OH 43201
Tel: (b) (6)
Fax:
Email:

Financial POC

(b) (6) Contracting Officer
Battelle
505 King Ave.
Columbus, OH 43201
Tel: (b) (6)
Fax:
Email:

Battelle may change the individuals designated as POC upon notice to DHS S&T of such change.

The DHS POCs are as follows:

DHS S&T Contracting Officer

Kevin C. Dillon
William J. Hughes Technical Center
(b)(2) (b)(6)
Atlantic City International Airport, NJ 08405
Tel: (b)(2) (b)(6)
Fax: 609-383-1973
(b)(2) (b)(6)

DHS S&T COTR

Sharon Moore
William J. Hughes Technical Center
(b)(2) (b)(6)
Atlantic City International Airport, NJ 08405
Tel: (b)(2) (b)(6)
Fax: 609-383-1973
(b)(2) (b)(6)

DHS S&T Invoicing

U.S. DHS, ICE
Attn: S&T EXD Invoice
Burlington Finance Center
P.O. Box 1000
Williston, VT 05495-1000
ST.Invoicing@hq.dhs.gov

DHS S&T may change the individual designated as a POC upon notice to Battelle of such change.

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Statement of Work for Bulk Explosives Detection Research and Laboratory Support

U.S. Department of Homeland Security Science and Technology Directorate Explosives Division

PR RSLF-10-00073

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Science and Technology Directorate (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The bulk explosives detection program supports this effort through developing technologies covering a broad array of nondestructive inspection technologies. The DHS is responsible for securing the nation's transportation system against terrorist or other criminal intent. Inspection technologies are being deployed worldwide to fight the war against terrorism. These technologies are in need of improvement or alternatives.

The Transportation Security Laboratory (TSL), located at the Federal Aviation Administration (FAA) W.J. Hughes Technical Center, is a nationwide center for explosives detection research, engineering, development, test and evaluation. The Bulk Explosives Detection Research Laboratory (referred to as the BDL) was formed and equipped to perform unique research and support development, evaluation and deployment of bulk nonintrusive inspection and explosives (or other chemical) detection methods.

The purpose of this amendment is to extend the period of performance to continue research and support for explosive detection development, evaluation and characterization analysis.

II. Scope of Work

Battelle Memorial Institute will perform the tasks described in this SOW:

A. The scope of this task includes the following activities:

- Applied research and advanced concept feasibility studies
- Laboratory machine operations, maintenance, data collection and experimentation
- Scientific and engineering support

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- Development of standard operating procedures
- Development of threat simulant materials
- Quality control, storage, and inventory tracking of raw materials, data collection samples, simulants, and laboratory supplies
- Purchase of equipment and consumables, including service contracts and gases
- Documentation and publication of procedures, methods, data and findings
- Management of data
- Cooperation with US national laboratories, industrial partners, and international partners
- Conduct of tours of the facility

REQUIREMENTS

Applied Research and Advanced Concept Feasibility Studies

- Battelle Memorial Institute shall perform targeted studies of various technical subjects within bulk explosives detection, utilizing government furnished or other equipment, in full cooperation, and in full coordination, with the Government. Emphasis shall be on subjects that address high priority operational needs, whether in near or longer-term, and shall be of high quality and reproducibility.
- Subject matter may include, but is not limited to, microstructure of materials, scattering/fluorescence, image quality improvement, false alarm reduction, elemental composition, simulants, high energy imaging, or neutron methods for threat detection.
- Battelle Memorial Institute shall prepare technical quick-look reports or formal reports, either final or interim reports for all applied research and advanced concept feasibility studies. At a minimum, Battelle Memorial Institute shall provide annual reports.

General Technical Support

- Battelle Memorial Institute shall provide engineering/technical expertise in support of the TSL in the following areas: x-ray imaging, computed tomography, x-ray diffraction, x-ray fluorescence, microscopy, process tomography, x-ray spectroscopy, image processing, data fusion, dual-energy x-ray imaging, texture analysis and other areas as appropriate to meet the needs of the BDL mission. This may require collaboration with scientists from, and infrequent travel to, processing data as needed, which includes using equipment onsite at the TSL, using data provided from another source, or possibly obtaining data at off-site locations.

BDL Operations

- General Laboratory Operations

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1. Battelle Memorial Institute shall manage the operations of the facility and maintain a neat, safe and orderly facility consistent with standard good laboratory practices, with the oversight of the Bulk Explosives/Weapons Detection Program Lead or designee.
2. Battelle Memorial Institute shall ensure that the facility is staffed and able to respond to technical inquiries a minimum of 32 hours per week during regular working hours (regular hours are considered 9 am to 4 pm weekdays), and also during the same time span conduct tours of the BDL on an as-needed basis. NOTE: off-hours work will be considered on a case-by-base basis.
3. Battelle Memorial Institute shall generate a master laboratory notebook(s) that includes a record of all daily activities, meetings, contacts, project progress, machine maintenance, equipment failures, problems, and any other pertinent information. This notebook must be kept in the lab at all times and remains property of the TSL. An electronic log may be kept in lieu of a physical log, on a common TSL server location, but must be backed up monthly onto another media source in case of computer failure. Individual machine notebooks shall also be generated for each major data collection system.
4. Battelle Memorial Institute shall attend regular meetings to discuss ongoing projects, future projects, schedules, issues and other pertinent information.
5. Battelle Memorial Institute shall assist in procuring all materials, supplies, equipment, software and services for the BDL. This will include helping to prepare specifications, lists of qualified equipment/vendors and purchase orders.
6. Battelle Memorial Institute shall implement all quality control and safety processes with the approval of the TSL. Battelle Memorial Institute shall maintain a Material Safety Data Sheet (MSDS) book that is current with all chemicals, test items and all other required materials that are located in the BDL. Battelle Memorial Institute shall work in a safe manner with hazardous materials including but not limited to energetic materials, acids, bases and peroxides. Battelle Memorial Institute shall represent the BDL lab at the monthly TSL Safety Steering Committee meeting. The TSL will supply all necessary dosimeters.

- BDL Network and Electronic Data Storage

Battelle Memorial Institute shall develop and/or maintain a network/server that is capable of backing up and storing all electronic data collected during the operation of the equipment. This network must be separate from the current DHS network and must employ data redundancy, in case of single drive failure.

- Design of Experiments

Battelle Memorial Institute shall design experiments, studies and tests in accordance with standard approaches to experimental design, particularly with respect to error analysis,

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although novel approaches are acceptable. Battelle Memorial Institute shall review all experiment designs with TSL prior to the start of experimental data collection.

- Equipment Calibration, Operation, Maintenance

Battelle Memorial Institute shall ensure that all experimental and test apparatus are kept in operational status at all times. Battelle Memorial Institute shall operate, collect data with, calibrate and perform routine manufacturer-recommended maintenance on laboratory equipment, including, but not limited to:

Leica Optical Microscope

NorthStar 450 keV CT system

SkyScan X-ray Microtomograph 1072

SkyScan X-ray Microtomograph 1172

Rigaku Primus II WDXRF Spectrometer

Rigaku Miniflex Diffractometer

Philipps X-PERT Pro Diffractometer

Phoenix v-Tome-x CT/DR X-ray System

Perkin Elmer Elemental Analyzer 2400 Series II

H&M Custom-made energy-dispersive Diffractometer (HAMSCAN)

LLNL Custom-made 150/320 KeV CT/DR X-ray System (HEXRAY).

Mettler-Toledo Model MX 5 microbalance

Mettler-Toledo PR503 Analytical Balance

Battelle Memorial Institute shall assist in arranging for repairs and other service necessary to keep laboratory equipment in good working order. Battelle Memorial Institute shall acquire any maintenance contracts required for the BDL equipment, shall keep all maintenance agreements up to date, and shall perform all regular maintenance outside of any service agreements with the manufacturers. Battelle Memorial Institute shall recommend upgrades to all equipment and shall assist the government in obtaining upgrades.

Sample preparation, storage and disposal

Battelle Memorial Institute shall prepare material samples to obtain optimal data on laboratory devices. These materials include but are not limited to solid minerals, metals, plastics, rubbers, putties, gels, liquids, slurries, emulsions, and powders. Samples will include perishable and nonperishable items, commercial items, foodstuffs, etc. NOTE: Explosives samples shall be acquired and stored in coordination with TSL explosives experts and in compliance with TSL explosives safety protocols.

Battelle Memorial Institute shall track, store and control sample materials in both their “raw” form and in “processed” form. The raw form is the material as originally obtained and “processed” forms are the samples prepared for experiments in the laboratory apparatus. Battelle Memorial Institute shall ensure that all samples are maintained at optimum

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temperature and humidity to maximize sample lifetime, and shall dispose of samples appropriately.

Explosive samples shall be logged, stored, and handled in accordance with applicable TSL safety protocols.

Development of Procedures

Battelle Memorial Institute shall develop, or modify existing, safety, quality control, sample preparation and operational procedures. Procedures shall be developed to be compliant with ISO 9001:2000 standards. These procedures shall comply with applicable standards, including, but not limited to ASTM, NIST, manufacturer-recommended, and TSL safety procedures. Procedures shall be documented electronically and a hardcopy set of procedures shall be readily available in the laboratory at all times. Procedures applicable to specific work and/or equipment shall be kept in close proximity to where the work will be accomplished.

- B. Personnel provided by Battelle Memorial Institute will have the skills and technical background necessary to successfully complete the tasks described in this SOW.

Program Element / Project	Major Tasks	Key Milestones and Deliverables
Laboratory support documentation	<ul style="list-style-type: none"> • Project plan 	<ul style="list-style-type: none"> • Approved project plan 30 days following award of contract modification. • Project plan shall include a work breakdown structure, description of technical tasks to be accomplished, risk mitigation plan, and detailed Gantt chart.
	<ul style="list-style-type: none"> • Weekly activity reports 	<ul style="list-style-type: none"> • First working day following reporting period
	<ul style="list-style-type: none"> • Monthly technical progress reports 	<ul style="list-style-type: none"> • The 15th of each month
	<ul style="list-style-type: none"> • Standard Operating Procedures (SOPs) 	<ul style="list-style-type: none"> • Standard Operating Procedures (SOPs) as developed

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	<ul style="list-style-type: none"> • Data Reports/Electronic Archiving 	As developed
Each of the applied research and advanced concept feasibility studies	<ul style="list-style-type: none"> • Technical reports (to be agreed upon on a task-by-task basis) 	<ul style="list-style-type: none"> • Quick Look Reports (QLRs): draft 10 working days after completion of activity • Technical Note/formal report: draft 30 calendar days after completion of activity • All reports: Final, 10 working days after receipt of government comments

** Days/months for deliverables are measured after contract award date unless otherwise indicated.*

III. Other Contract Details

A. **Period of Performance.** The period of performance for this SOW is 10 months from contract award date. DHS may give subsequent extension notices to Battelle Memorial Institute in writing for further performance in accordance with the terms of this SOW.

Travel. Travel may be required in the performance of the duties listed herein. The DHS S&T Contracting Officer’s Technical Representative (COTR) must approve all additional travel. All travel and other direct costs associated with the execution of the tasks indicated in this SOW will be reimbursed in accordance with the limits set forth in the Federal Travel Regulations, provided the performer provides appropriate supporting documentation.

The DHS S&T COTR and the DHS S&T Special Assistant for International Policy must approve all foreign travel in advance.

B. DHS-Furnished Information.

1. DHS will provide certain DHS information, materials, and forms unique to DHS to Battelle Memorial Institute to support certain tasks under this SOW.
2. The DHS S&T COTR identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.

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3. Battelle Memorial Institute will prepare any documentation according to the guidelines provided by DHS.

C. **DHS-Furnished Facilities, Supplies, and Services.** Basic facilities such as work space and associated operating requirements (e.g., phones, desks, utilities, desktop computers, and consumable and general purpose office supplies) will be provided to Battelle Memorial Institute personnel at the TSL.

D. **Place(s) of Performance.** Battelle Memorial Institute will perform the work under this SOW at the TSL in the William J. Hughes Technical Center, Atlantic City International Airport. Battelle Memorial Institute will perform certain work under this SOW at a federal government facility designated by DHS S&T.

E. **DHS-Furnished Property.** DHS property will not be provided to Battelle Memorial Institute unless otherwise agreed in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$500 that is required to support technical tasks performed pursuant to this SOW, Battelle Memorial Institute shall obtain the DHS S&T COTR's prior written consent. The DHS S&T COTR may lower or raise the aforementioned \$500 threshold at his/her discretion on written notice to Battelle Memorial Institute. If the DHS S&T COTR consents to such purchase, such item shall become the property of DHS. Battelle Memorial Institute will maintain any such items according to currently existing property accountability procedures. The DHS S&T COTR will determine the final disposition of any such items.

F. **Deliverables.** Battelle Memorial Institute will provide all deliverables identified in this SOW directly to the DHS S&T COTR and DHS S&T Contracting Officer with a copy of the transmittal letter to the Financial Analyst.

G. **Program Status Report.** Battelle Memorial Institute will deliver a monthly program status report to the DHS S&T COTR, DHS S&T Explosives Business Operations Manager, and DHS S&T Financial Analyst on the 15th day of each month containing metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment of all work performed herein. This document will describe the previous 30 calendar days' activity, technical progress achieved against goals, difficulties encountered, recovery plans (if needed), plans for the next 30 calendar day period, and financial status. The length of the report is not to exceed one page.

H. **Invoices.** Battelle Memorial Institute will deliver a monthly invoice to ST.Invoicing@hq.dhs.gov on the 15th day of each month.

I. **Funding Requirements.** DHS will provide funding to Battelle Memorial Institute in accordance with DHS's appropriations and available funds.

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J. Security Requirements.

- a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
- b. If classified work is required under this SOW, DHS will provide specific guidance to Battelle Memorial Institute as to which work will be conducted in a classified manner and at which classification level. Battelle Memorial Institute will also adhere to other applicable Government orders, guides, and directives pertaining to classified or confidential work. This SOW may require access to information at the Secret level. All contractor personnel shall be required obtain a secret security clearance.

IV. Points of Contact

Battelle Points of Contact (POCs) are as follows:

Contracting POC

(b) (6) Contracting Officer
Battelle
505 King Ave.
Columbus, OH 43201
Tel: (b) (6)
Fax: (b) (6)
Email: (b) (6)

Technical POC(s)

Technical POC(s) –
(b) (6)
Battelle Memorial Institute
2900 Fire Road
Egg Harbor Twp, NJ 08234
Telephone- (b) (6)
(b) (6)

Battelle may change the individual designated as a POC upon notice to DHS S&T of such change.

The DHS POCs are as follows:

DHS S&T Contracting Officer

Kevin C. Dillon
William J. Hughes Technical Center
Building 315, Room 132

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Atlantic City International Airport, NJ 08405

Tel: (b)(2) (b)(6)

Fax: 609-383-1973

(b)(2) (b)(6)

DHS S&T COTR

Sharon Moore

William J. Hughes Technical Center

TSL-200, Building 315

Atlantic City International Airport, NJ 08405

Tel: (b)(2) (b)(6)

Fax: 609-383-1973

(b)(2) (b)(6)

DHS S&T Invoicing

U.S. DHS, ICE

Attn: S&T EXD Invoice

Burlington Finance Center

P.O. Box 1000

Williston, VT 05495-1000

ST.Invoicing@hq.dhs.gov

DHS S&T may change the individual designated as a POC upon notice to ATC of such change.

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Statement of Work for the Cargo Characterization Project

U.S. Department of Homeland Security Science and Technology Directorate Explosives Division

PR# RSTL-10-00017

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. DHS S&T is committed to protecting the homeland, its infrastructure, and citizens from threats including those presented by Improvised Explosive Devices (IEDs).

The purpose of this statement of work (SOW) is to obtain technical support for the DHS S&T Cargo Characterization project. This SOW sets forth the requirements to accomplish a variety of specific activities related to the collection, analysis, and reporting of cargo metrics at various Independent Air Carrier locations throughout the U.S. The identified requirements presented here have a direct impact on several other S&T projects (including the Density and Complexity Assessment Software Tool, Emerging Technologies development, On-Going Laboratory Assessments, and Recurrent and Refresher Cargo Screener Training development) that will help Transportation Security Administration (TSA) meet its overall needs and goals.

Battelle Memorial Institute shall provide all of the staffing, management, and resources to perform the tasks described below and shall provide personnel that have the skills and technical background necessary to successfully complete the tasks described in this SOW. These tasks will help enable the Air Cargo Program to meet its objectives.

II. Scope of Work

This is a new effort under an existing agreement with Battelle (contract #HSHQDC-09-F-00043).

Battelle shall perform the following tasks.

1. Conduct project planning activities

- Battelle shall schedule and host a kickoff meeting within 7 calendar days after contract award. A member of Battelle's staff shall take notes and provide the federal project monitor a copy of the minutes of the meeting. The DHS technical monitor will provide

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Battelle an overview of the project, scope, background, purpose, and general timeline of the effort. There will be sufficient time for Battelle's staff to ask questions so that they have adequate information needed to draft a project plan.

- Battelle shall draft and deliver a project plan that outlines Battelle's proposed management and technical approach to successfully complete the project. It shall also describe all of the associated tasks, a detailed schedule in MS Project broken down into relevant work breakdown structure elements, risks and risk mitigation strategies, labor categories, estimated personnel hours and cost by labor category, travel cost estimates, and material purchase estimates.

2. Provide technical support and site coordination activities

- Battelle shall work closely with the staff of the S&T Air Cargo Program, as well as the TSA's Transportation Security Network Management (TSNM) to assist in the coordination of Indirect Air Carrier (IAC) sites for data collection.
- Battelle shall develop, deliver, and maintain a data collection plan, which shall include a master schedule that is to be updated as new sites agree to host data collection events, as well as when site coordination activities are completed and site visits have been finalized.
- Battelle shall prepare a MS PowerPoint briefing that provides an overview and objective of the project. The purpose of the briefing is to present information to IACs contemplating hosting a data collection effort. The briefing shall describe how many contractor support staff will be required to collect the data, anticipated length of the data collection, the type of data to be collected, what is required of the IAC (e.g., badging/escorts, access to the cargo, forklift and driver, electrical power), the need to download X-ray images, etc.

3. Conduct data collection activities

- Battelle shall travel to approximately four geographically dispersed IACs and collect cargo metrics across two different time periods (to acquire geographical and seasonal data). The government will provide a cargo characterization database to Battelle as government furnished information. This database includes the type of information (i.e., metrics) Battelle shall collect. Currently, the metrics include parcel dimensions, weight, exterior packaging (e.g., metal drums, cardboard boxes, wood crates, etc.), and commodity type (e.g., fresh produce, fresh flowers, printed material, machine parts, etc.). To the extent possible, Battelle shall also collect other data, such as interior packaging (e.g., Styrofoam peanuts, air pillows, gel packs, etc.), specific item being shipped, X-ray images and photographs of the cargo, and copies of Bills of Lading. For cases where interior packaging or specific contents cannot be visually acquired, Battelle shall obtain that information by calling companies who either shipped or received the cargo.
- Battelle shall populate, maintain, archive, and deliver a cargo characterization database that contains all of the metrics listed above. Hyperlinks between the data and actual X-

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ray images and photographs shall be provided. In addition, Battelle shall include notes regarding a particular shipment if it is deemed helpful. Examples include items like a number of identical boxes within a single parcel, unusual packaging, or elaborative description of the cargo.

4. Data analyses and reporting

- Battelle shall provide a trip report after each site visit. The report must contain the data collection location, names of personnel who travelled, dates of travel, points of contact, a short description of the purpose and problems encountered (if any), and a synopsis of the trip (e.g., number of data points acquired, metrics that could not be obtained, equipment used by IACs, standard operating procedures for the site visited, etc.).
- Upon completion of the first round of site visits, Battelle shall draft an interim test and evaluation report. The report must contain an introduction, background, scope, sites visited, dates for each data collection activity, summary of the data collected (broken down by cargo commodities, weight and dimension distributions, and exterior packaging. For additional data that were able to be collected (e.g., interior packaging, X-ray images, and photographs), this information is to be described. Analyses such as average density and axial density shall also be conducted and reported. Lastly, lessons learned, conclusions, and recommendations shall be provided.
- Battelle shall prepare a briefing summarizing the interim test and evaluation report. A staff member most knowledgeable with the project may be requested to verbally provide the briefing to the Air Cargo Program Manager, Explosives Division management, and other government organizations, such as TSA's Office of Security Technology and Transportation Security Network Management staff.
- Upon completion of the final site visit, Battelle shall draft a final report that contains the same information specified in the interim report. It shall include a comprehensive accounting of the IACs who participated, timeframe of visits, data collection methodology, data captured, results of the analyses, a formal discussion section, conclusions, recommendations, and lessons learned.
- Lastly, Battelle shall deliver an external hard disk drive that contains all of the data collected, including X-ray images and photographs. The database shall be in MS Office Access format or an agreeable format by the government and Battelle staff.

5. Project management

- Battelle shall provide all of the necessary technical, business, and administrative planning; organizing; managing; coordinating; and tracking information associated with this task.
- Battelle shall deliver a Program Status Report (PSR) as described in Section V.

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- Battelle shall facilitate and participate in periodic (e.g., weekly or bi-weekly) meetings. The purpose of these meetings is to (1) review the project in terms of contract schedule, performance, and cost; (2) identify government/contractor/subcontractor interface problems; (3) assign and track action items for problem resolution; and (4) identify future risk factors, steps taken to mitigate those risks, and recommendations.

III. Key Milestones and Deliverables

Program Element/ Project	Major Sub-Tasks	Key Milestones and Deliverables
Cargo Characterization	Project Planning	<ul style="list-style-type: none"> • Conduct kickoff meeting (No Later Than [NLT] 7 Calendar Days After Contract Award) • Deliver kickoff meeting minutes (NLT 3 Calendar Days After [CDA] kickoff meeting) • Deliver a draft project plan (NLT 14 CDA contract award)
	Technical Support and Site Coordination Activities	<ul style="list-style-type: none"> • Deliver a draft data collection plan (NLT 35 CDA contract award) • Deliver a project overview briefing (NLT 7 CDA government request)
	Data Collection Activities	<ul style="list-style-type: none"> • Deliver updated database (NLT 5 CDA completion of data collection effort)
	Data Analyses and Reporting	<ul style="list-style-type: none"> • Deliver trip report (NLT 5 CDA completion of data collection effort) • Deliver draft interim test and evaluation report (NLT 21 CDA completion of the first round of data collection) • Deliver draft interim briefing (NLT 21 CDA completion of the first round of data collection) • Deliver draft final test and evaluation report (NLT 21 CDA completion of the last data collection activity) • Deliver final database (NLT 21 CDA completion of the last data collection activity)
	Project Management	<ul style="list-style-type: none"> • Deliver draft PSR (15th of each month)

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IV. Project Timeline

Below is a summary of the tasking timeline for this effort:



V. Other Contract Details

A. Period of Performance.

The period of performance for this SOW is 12 months from contract award date. DHS may give subsequent extension notices to Battelle in writing for further performance in accordance with the terms of this SOW.

B. Travel.

Travel will be required in the performance of the duties listed herein. It is anticipated that travel will consist of two site visits to four IACs throughout the duration of this effort. The participating IACs and their locations will be determined through close coordination with the TSA and interested IACs. For the purpose of determining cost and schedule estimates, the following cities should be used: Seattle, WA; Dallas, TX, New York City, NY; and Boston, MA.

The DHS S&T Contracting Officer's Technical Representative (COTR) must approve all additional travel. All travel and other direct costs associated with the execution of the tasks indicated in this SOW will be reimbursed in accordance with the limits set forth in the Federal Travel Regulations, provided the performer provides appropriate supporting documentation.

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The DHS S&T COTR and the DHS S&T Special Assistant for International Policy must approve all foreign travel in advance.

C. DHS-Furnished Information.

1. DHS will provide certain DHS information, materials, and forms unique to DHS to Battelle to support certain tasks under this SOW.
2. The DHS S&T COTR identified in this SOW shall be the point of contact (POC) for identification of any required information to be supplied by DHS.
3. Battelle will prepare any documentation according to the guidelines provided by DHS.

D. DHS-Furnished Facilities, Supplies, and Services.

If work at DHS-provided facilities is necessary for the services being performed under this SOW, such facilities will be provided at the Transportation Security Laboratory (TSL) at the William J. Hughes Technical Center. Parking facilities will be provided; however, they may not be within the compound fence. Basic facilities such as work space and associated operating requirements (e.g., phones, desks, utilities, desktop computers, and consumable and general purpose office supplies) will be provided to contractor personnel in the event that on-site work stations within TSL's office are required.

E. Place(s) of Performance.

Battelle shall perform the work under this SOW at their Egg Harbor Township, NJ location.

F. DHS-Furnished Property.

DHS property, in the form of an external hard drive containing the most recent cargo characterization database, will be provided to Battelle. Otherwise, no additional property will be provided unless agreed in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$50,000 that is required to support technical tasks performed pursuant to this SOW, Battelle shall obtain the DHS S&T COTR's prior written consent. The DHS S&T COTR may lower or raise the aforementioned \$50,000 threshold at his/her discretion on written notice to Battelle. If the DHS S&T COTR consents to such purchase, such item shall become the property of DHS. Battelle shall maintain any such items according to currently existing property

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accountability procedures. The DHS S&T COTR will determine the final disposition of any such items.

G. Deliverables. Battelle shall provide all deliverables identified in this SOW directly to the DHS S&T COTR and DHS S&T Contracting Officer with a copy of the transmittal letter to the Financial Analyst.

H. Program Status Report.

Battelle will deliver a monthly program status report to the DHS S&T COTR, DHS S&T Explosives Business Operations Manager, and DHS S&T Financial Analyst on the 15th day of each month containing metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment information of all work performed hereunder. This document will describe the previous 30 calendar days' activity, technical progress achieved against goals, difficulties encountered, recovery plans (if needed), plans for the next 30 calendar day period, and financial status.

I. Invoices. Battelle will deliver a monthly invoice to ST.Invoicing@hq.dhs.gov on the 15th day of each month.

J. Funding Requirements. DHS will provide funding to Battelle in accordance with DHS's appropriations and available funds.

K. Security Requirements.

1. All work performed under this SOW is unclassified unless otherwise specified by DHS.
2. If classified work is required under this SOW, DHS will provide specific guidance to Battelle as to which work will be conducted in a classified manner and at which classification level. Battelle shall also adhere to other applicable Government orders, guides and directives pertaining to classified or confidential work. This SOW may require access to information at the Secret level for National Security Information.

VI. Points of Contact

Battelle Points of Contact (POCs) are as follows:

Contracting POC

(b) (6) Contracting Officer
Battelle
505 King Ave.
Columbus, OH 43201
Tel: (b) (6)

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Fax: 614-458-3615

Email: (b) (6)

Technical POC(s)

Technical POC(s) –

(b) (6)

Battelle Memorial Institute

2900 Fire Road

Egg Harbor Twp, NJ 08234

Telephone- (b) (6)

(b) (6)

Battelle may change the individual designated as a POC upon notice to DHS S&T of such change.

The DHS POCs are as follows:

DHS S&T Contracting Officer

Kevin C. Dillon

William J. Hughes Technical Center

(b)(2) (b)(6)

Atlantic City International Airport, NJ 08405

Tel: (b)(2) (b)(6)

Fax: 609-383-1973

(b)(2) (b)(6)

DHS S&T COTR

Sharon Moore

William J. Hughes Technical Center

(b)(2) (b)(6)

Atlantic City International Airport, NJ 08405

Tel: (b)(2) (b)(6)

Fax: 609-383-1973

(b)(2) (b)(6)

DHS S&T Invoicing

U.S. DHS, ICE

Attn: S&T EXD Invoice

Burlington Finance Center

P.O. Box 1000

Williston, VT 05495-1000

ST.Invoicing@hq.dhs.gov

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DHS S&T may change the individual designated as a POC upon notice to ATC of such change.

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Statement of Work for Explosive Effects Laboratory (EEL) Support

**U.S. Department of Homeland Security
Science and Technology Directorate
Explosives Division
Transportation Security Laboratory**

PR RSLF-10-00083

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Conveyance Protection Program of Transportation Security Laboratory supports this effort through establishing Explosive Effects Laboratory (EEL) and developing EEL's core capabilities.

The Transportation Security Laboratory (TSL) has established a distributed laboratory for conducting fundamental and applied research to characterize improvised explosives and explosive devices and their effects on personnel and structures. The research areas of this laboratory include, but are not limited to, (1) determination of the sensitivity and stability of improvised explosives due to impact, friction, electrostatic discharge and thermal changes, (2) conducting elemental composition, explosive potential, and/or detection probability of liquid and solid energetic materials, (3) modeling and simulation of explosive events using finite element or hydrodynamic software, (4) determining material and structural response to shock loading through testing, (5) Identify and develop explosive mitigation technologies, and (6) development of new test instrumentation techniques. The objective of this project is to provide research, engineering, development, test and evaluation support in explosives and explosives effects characterization and blast mitigation to EEL of TSL.

The purpose of this modification is to continue to provide research, engineering, development, test and evaluation support in explosives and explosives effects characterization and blast mitigation to EEL of TSL.

II. Scope of Work

The TSL will assign specific explosive or explosive effects characterization or blast mitigation tasks to Battelle as deemed necessary by the Technical Monitor. The majority of directed tasks will be considered level of effort. However, the TSL may request that a cost estimate, schedule and potential risks be provided by Battelle for certain tasks. At the time of such direction, the

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TSL Technical Monitor will define any documentation, software, equipment or test fixtures that the Battelle must deliver in order to satisfy the requirements of the task.

Battelle will perform the tasks described in this SOW:

1. Battelle shall furnish TSL on-site resources to act as the primary focal point for directed on-site activities.
2. Battelle shall provide information technology (IT) services to support the maintenance and upgrade of the computational hardware installed within TSL. Battelle shall conduct routine backup of data and install critical patches and revisions to resident software applications. As directed, Battelle will purchase additional software applications to supplement the modeling and simulation capability of EEL. Battelle may also be directed to purchase technical support packages for existing installed software applications.
3. Battelle shall design, develop and manufacture custom test fixtures that will measure the effects of explosive phenomena. Battelle will continue to develop the image correlation test fixture and initiate the design of other test fixtures. Battelle will be required to maintain and operate friction, electrostatic discharge, and impact sensitivity test fixtures.
4. Battelle shall provide test engineering support to assist with test planning, set up, test conduct and clean up; scientific equipment operation; data acquisition, compilation, reduction and analysis; and technical report writing. Battelle shall purchase supplies and equipment necessary for supporting all testing operations.
5. Battelle shall provide, as requested, technical support on modeling and simulation of explosive events using chosen hydrodynamic codes or finite element software.
6. As emerging requirements are defined, Battelle shall provide appropriate technical support to satisfy explosive and explosive effects characterization and blast mitigation task needs.

Battelle shall submit the following deliverables:

- Test and evaluation plans as required
- Test and evaluation data and databases as required
- Test and evaluation reports as required
- Project final report as required
- Test designs and assembled fixtures drawings as required
- Modeling and simulation reports as required
- Simulation models as required
- Monthly reports according to contract requirements
- Trip reports according to contract requirements.

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Personnel provided by Battelle will have the skills and technical background necessary to successfully complete the tasks described in this SOW, including but not limited to the following:

- Knowledge and experience in plan, design, and conduct of explosive testing.
- Knowledge and experience in instrumentation and data acquisition for explosive testing.
- Knowledge and experience in digital image correlation for explosive response measurement.
- Knowledge in blast and ballistic armor designs.
- Expertise in hydrodynamic code modeling and simulation for blast and ballistic events.

Program Element / Project	Major Tasks	Key Milestones and Deliverables*
Explosive Effects Laboratory Support: provide research, engineering, development, test and evaluation support in explosives and explosives effects characterizations and blast mitigation EEL of TSL.	<ul style="list-style-type: none"> • Battelle shall design, develop and manufacture custom test fixtures, as requested, that will measure the effects of explosive phenomena. <ul style="list-style-type: none"> ▪ 1 months - Design ▪ 2 months - Manufacture 	<ul style="list-style-type: none"> • 1 months – Design package • 2 months – Test fixtures
	<ul style="list-style-type: none"> • Battelle shall provide test engineering support, as requested, to assist with test planning, set up, test conduct and clean up; scientific equipment operation; data acquisition, compilation, reduction and analysis; and technical report writing. <ul style="list-style-type: none"> ▪ 1 months – Plan ▪ 2 months – Set up & Tests ▪ 3 months – Data analysis ▪ 4 months – Test report 	<ul style="list-style-type: none"> • 1 months – Test plan • 4 months – Test report.
	<ul style="list-style-type: none"> • Battelle shall provide, as requested, technical support on modeling and simulation of explosive events using commercial finite element software. <ul style="list-style-type: none"> ▪ 2 months – Develop models ▪ 3 months – Conduct analyses ▪ 4 months – Analysis report. 	<ul style="list-style-type: none"> • 4 months – Analysis report • 7 months – Final report
<p><i>* Time periods are measured from the task requested date.</i></p>		

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III. Other Contract Details

- A. **Period of Performance.** The period of performance for this SOW is 12 months from contract award date. DHS may give subsequent extension notices to Battelle in writing for further performance in accordance with the terms of this SOW.
- B. **Travel.** Travel may be required in the performance of the duties listed herein. The DHS S&T Contracting Officer's Technical Representative (COTR) must approve all additional travel. All travel and other direct costs associated with the execution of the tasks indicated in this SOW will be reimbursed in accordance with the limits set forth in the Federal Travel Regulations, provided the performer provides appropriate supporting documentation.
- C. **DHS-Furnished Information.**
1. DHS will provide certain DHS information, materials, and forms unique to DHS to Battelle to support certain tasks under this SOW.
 2. The DHS S&T COTR identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
 3. Battelle will prepare any documentation according to the guidelines provided by DHS.
- D. **DHS-Furnished Facilities, Supplies, and Services.** Basic facilities such as work space and associated operating requirements (e.g., phones, desks, utilities, desktop computers, and consumable and general purpose office supplies) will be provided to Battelle personnel working in TSL's facilities.
- E. **Place(s) of Performance.** Battelle will perform the work under this SOW at Battelle offices. In addition, Battelle will perform certain works under this SOW at TSL's facilities.
- F. **DHS-Furnished Property.** DHS property will not be provided to Battelle unless otherwise agreed to in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$50,000 that is required to support technical tasks performed pursuant to this SOW, Battelle shall obtain the DHS S&T COTR's prior written consent. The DHS S&T COTR may lower or raise the aforementioned \$50,000 threshold at his/her discretion on written notice to Battelle. If the DHS S&T COTR consents to such purchase, such item shall become the property of DHS. Battelle will maintain any such items according to currently existing property accountability procedures. The DHS S&T COTR will determine the final disposition of any such items.

- G. **Deliverables.** Battelle will provide all deliverables identified in this SOW directly to the DHS S&T COTR and DHS S&T Contracting Officer with a copy of the transmittal letter to the Financial Analyst.

Distribution is authorized to U.S. government agencies only. Contains information that may be exempt from public release under the Freedom of Information Act. Before this SOW is released to the public, approval is required by the Department of Homeland Security Science and Technology Directorate.

- H. **Program Status Report.** Battelle will deliver to the S&T Technical Representative and Financial Analyst by the 15th of the month a monthly status report containing accomplishments, upcoming events, risks encountered and mitigation measures taken, project Gantt chart, and financial information (amount in reserve, amount committed, amount obligated, amount expended, and available balance).
- I. **Invoices.** Battelle will deliver a monthly invoice to ST.Invoicing@hq.dhs.gov on the 15th day of each month.
- J. **Funding Requirements.** DHS will provide funding to Battelle in accordance with DHS's appropriations and available funds.
- K. **Security Requirements.**
 - a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
 - b. If classified work is required under this SOW, DHS will provide specific guidance to Battelle as to which work will be conducted in a classified manner and at which classification level. Battelle will also adhere to other applicable Government orders, guides, and directives pertaining to classified or confidential work. This SOW may require access to information at the Secret level.

IV. Points of Contact

Battelle Points of Contact (POCs) are as follows:

Contracting POC

(b) (6) Contracting Officer
Battelle
505 King Ave.
Columbus, OH 43201
Tel: (b) (6)
Fax: (b) (6)
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Technical POC(s)

Technical POC(s) –
(b) (6)
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(b) (6)

Battelle may change the individual designated as a POC upon notice to DHS S&T of such change.

The DHS POCs are as follows:

DHS S&T Contracting Officer

Kevin C. Dillon
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Atlantic City International Airport, NJ 08405
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DHS S&T COTR

Sharon Moore
William J. Hughes Technical Center
(b)(2) (b)(6)
Atlantic City International Airport, NJ 08405
Tel: (b)(2) (b)(6)
Fax: 609-383-1973
(b)(2) (b)(6)

DHS S&T Invoicing

U.S. DHS, ICE
Attn: S&T EXD Invoice
Burlington Finance Center
P.O. Box 1000
Williston, VT 05495-1000
ST.Invoicing@hq.dhs.gov

DHS S&T may change the individual designated as a POC upon notice to ATC of such change.

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Statement of Work
Electromagnetic Studies in Explosives and Weapons Detection (EMXLAB)
U.S. Department of Homeland Security
Science and Technology Directorate
Transportation Security Laboratory

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Transportation Security Laboratory (TSL) supports this effort through the Next Generation Checkpoint's execution plan.

The TSL located at the W. J. Hughes Technical Center, Atlantic City, NJ has a requirement for a Research and Development (R&D) technical support contractor to perform, but not be limited to, the activities and tasks specified in this section. Battelle hereby referenced as the Contractor shall have the capability to provide on-site and off-site support as required. The support services shall provide specific technical expertise to the TSL, in accordance with technical criteria and disciplines determined by the TSL.

The THz region of the electromagnetic spectrum has been identified as a promising probe for detecting concealed weapons and explosives. Not only is imaging becoming a reality, but the THz frequency regime contains a number of molecular vibrational and rotational modes, leading to distinct signatures of explosives and other materials. In addition, the dielectric constant also can be an indicator of the type of material.

Although some measurements have been made at various laboratories, they are not nearly as comprehensive as obtained at the dedicated research laboratory at the TSL, the Electromagnetic Studies in Explosives and Weapons Detection (EMXLAB). A database of dielectric and THz signatures of explosives, and innocuous materials of interest to transportation is invaluable. And, a study of propagation and reflection in the GHz range, from suicide bombers and their IED is very important.

Systems that use RF energy as the probe will need realistic simulants for testing when the use of explosives is impractical. This measurement lab facilitates simulant development by performing the same characterizations of simulant compositions as on explosives.

This Statement of Work (SOW) is for the staffing and operation of the EMXLAB to continue Task 11 of Contract **HSHQDC09-F-00043**. The EMXLAB is the primary research facility for measurements and study of the interaction of electromagnetic radiation with weapons and explosives. This applied research supports the development of equipment that provides the nation's security for all transportation and force protection venues.

Five technical areas, included but not limited to, for the EMXLAB are: 1) Terahertz reflection and attenuation spectroscopy, 2) dielectric constant measurements, 3) Terahertz imaging, 4) Raman spectroscopy of explosives, and 5) transmission and reflection of GHz radiation from personnel and targets. This list will expand as new technology and science for security is developed.

This work is within the scope of **Task 11 of Contract HSHQDC09-F-00043**, and represents additional work required. This is the same SOW for Task 11 as the cited contract awarded on March 10, 2009.

II. Scope of Work

The scope of this project is to maintain, develop, and implement a laboratory for the purpose of acquiring electromagnetic signature data of explosives and other materials. This project, is supported by the core capability initiative for research and development, will contribute to the overall mission of the bulk explosives and weapons detection long-term research program. The scope of this project includes the following general tasks:

- Literature searches
- Preparation of plans, procedures and reports
- Adaptation of specialized laboratory spaces within existing building structures
- Development/assembly of experimental apparatus
- Design and execution of experimental studies.

A. Project plan

There are multiple technical areas (TAs) which are focus of the EMXLAB: 1) Terahertz reflection and attenuation spectroscopy, 2) dielectric constant measurements, 3) Terahertz imaging, 4) radar measurements, and 5) laser spectroscopy. The contractor shall develop a plan, which incorporates these areas into a coherent and complete plan for the EMXLAB project.

B. Literature Survey

The contractor shall review current status of the TA's and perform a literature survey. The contractor shall identify and obtain seminal works specific to the TAs.

C. Laboratory Infrastructure Requirements

The contractor shall advise the TSL on EMXLAB experimental facility requirements, including: floor space, plumbing, heating/cooling, furniture, computing, office, communications, safety, supplies, and budget.

The contractor shall obtain necessary temporary or permanent equipment enclosures or workspaces, which are required for safety or environmental purposes.

D. Equipment and Supplies Acquisition

The contractor shall purchase commercially available experimental apparatus and obtain necessary supplies, in accordance with TSA guidance. Experimental apparatus shall be delivered to the EMXLAB in coordination with the TSL inventory control personnel.

The contractor shall install the equipment in a location to be designated by the TSA.

For all experimental apparatus or hardware to be developed the contractor shall provide justification for not using commercially available equipment.

E. Laboratory Operations

The contractor shall manage the operations of the EMXLAB with the oversight of the Head of the Personnel Imaging Branch or designee.

The contractor shall maintain a neat, safe and orderly laboratory consistent with standard prudent laboratory practices.

The contractor shall assist the TSL in procuring materials, supplies, equipment, software and services for the EMXLAB of a general nature. This will include helping to prepare specifications, lists of qualified equipment vendors and purchase orders.

The contractor shall implement all quality control and safety processes with the approval of the TSL. The contractor shall work in a safe manner with hazardous materials including but not limited to energetic materials, acids, bases and peroxides. The contractor shall maintain credentials for handling explosives.

The contractor shall execute experimental studies in accordance with TSL-approved plans and SOPs.

The contractor shall develop or utilize COTS automated methods and software in performing test and evaluation, recording and analyzing data, or other methods to improve efficiency and quality.

Master laboratory notebook: The contractor shall generate a master laboratory notebook(s) that includes a record of all daily activities, meetings, contacts, project progress, machine maintenance, equipment failures, problems, and any other pertinent laboratory information. This notebook must be kept in the lab at all times and remains property of the TSL. An electronic log may be kept in lieu of a physical log, on a common TSL server location, but must be regularly backed up onto another media source in case of server failure.

The contractor shall maintain a Material Safety Data Sheet (MSDS) book that is current with all chemicals, test items and all other required materials that are located in the EMXLAB.

EMXLAB staffing: Once operational, the contractor shall ensure that the laboratory is staffed and able to respond to technical inquiries and perform scientific experiments and analysis a minimum of 32 hours per week during regular working hours (regular hours are considered 9 am to 5 pm weekdays), and also during the same time span to conduct tours of the EMXLAB on an as-needed basis. Contract personnel will not report to the TSL at any times the TSL is not operating.

The contractor shall operate, collect data with, calibrate and perform routine manufacturer-recommended maintenance on laboratory equipment.

The contractor shall assist in arranging for repairs and other service necessary to keep laboratory equipment in good working order. The contractor will not be responsible for maintenance contracts, but will be required to notify the COTR 60 days before any machine service contract expires.

The contractor shall assist the TSL in procuring all maintenance agreements.

The contractor shall recommend upgrades to all equipment and shall assist the government in obtaining upgrades.

The contractor shall prepare material samples to obtain optimal data on laboratory devices. These materials include but are not limited to solid minerals, metals, plastics, rubbers, putties, gels, liquids, slurries, emulsions and powders. Samples will include perishable and nonperishable items.

The contractor shall maintain a sample/test article program that will track, store and control sample materials. The contractor shall ensure that all samples are maintained at

optimum temperature and humidity to maximize sample lifetime, and shall dispose of samples appropriately.

The contractor shall develop standard operating procedures (SOPs) for all significant processes required to perform the experimental studies, including, but not limited to: sample preparation, laboratory safety, disposal of hazardous materials, operation of equipment, recording data, data reduction and analysis, data storage, and reporting.

Laboratory procedures shall be developed to be compliant with ISO 9001:2000 standards. These procedures shall comply with applicable standards, including, but not limited to ASTM, NIST, manufacturer-recommended, and TSL safety procedures.

The contractor shall provide training to TSL in the standard operating procedures and other relevant topics involved in experimental studies.

SOPs shall be documented electronically and a hardcopy set of procedures shall be readily available in the laboratory at all times. Procedures applicable to specific work and/or equipment shall be kept in close proximity to where the work will be accomplished. 5.1. The contractor shall develop a detailed schedule for specific experiments and maintain the schedule as experiments proceed.

F. Reporting

Laboratory notebooks. The contractor shall maintain a laboratory notebook for each technical area of the EMXLAB, which will be continuously available for inspection by the TSL.

Weekly activity reports: The contractor shall provide informal electronic activity reports of the work done on a weekly basis. This report should cover:

- Progress made on current tasks
- Problems encountered on current tasks
- Notification of possible future problems
- Attached filled out forms of all upcoming equipment / material purchases
- In total this report will not exceed 5 pages of double spaced text.

Quick-look reports. The contractor shall prepare and deliver a quick-look reports on a weekly basis containing summary (preliminary) findings of experimental studies.

Monthly progress reports. The contractor shall provide detailed monthly technical progress reports containing the status of all tasks. This report shall include, but not be limited to, the following areas:

Status of all on-going experimental studies including findings, problems encountered, problem resolution, risk analysis, schedule updates, and experimental data;

Status of Lab Operations including: Lab equipment operability, maintenance, problems, calibration, Record of tours or demonstrations, Meetings attended, Sample/Test article inventory, Reporting/Documentation, Materials/supplies Inventory.

Formal technical reports: The contractor shall provide formal technical reports from experimental studies every six months (or other acceptable schedule).

Data. The contractor shall provide all data, photographs, spreadsheets, databases, and other data acquired during experimental studies. The contractor shall maintain a database in the EMXLAB of all data acquired and shall maintain hard-copies of all technical reports. The contractor shall prepare data for publication in conference proceedings, journals, or other venue upon request.

III. Other Contract Details

1. Period of Performance.

The period of performance for this SOW is 10 months from contract award. DHS may give subsequent extension notices to the Contractor in writing for further performance in accordance with the terms of this SOW.

2. Travel.

Temporary travel duty shall be required as necessary. The Contractor shall travel as necessary and tasked to support the contract. The Contractor shall provide on-site personnel as needed at work locations. Work locations may vary across the United States and international sites. Travel shall be approved by the COTR.

Travel is estimated for each quarter for 2 contractors making a trip to the west coast and gulf coast and staying for 3 to 5 days for research, development and testing in support of the EMXLAB.

3. DHS-Furnished Information.

- a. DHS will provide certain DHS information, materials, and forms unique to DHS to the Contractor to support certain tasks under this SOW.
- b. The DHS S&T Technical Representative identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
- c. The Contractor will prepare any documentation according to the guidelines provided by DHS.

4. DHS-Furnished Facilities, Supplies, and Services.

Work at DHS-provided facilities is necessary for the services being performed under this SOW, and such facilities will be provided at the Transportation Security Laboratory in Atlantic City International Airport, NJ.

5. Place of Performance.

The Contractor will perform the work under this SOW at the Transportation Security Laboratory within the EMXLAB in Building 315.

6. DHS-Furnished Property.

DHS property will not be provided to the Contractor unless otherwise agreed in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$50,000 that is required to support technical tasks performed pursuant to this SOW, the Contractor shall obtain the DHS S&T Technical Representative's prior written consent. The DHS S&T Technical Representative may lower or raise the aforementioned \$50,000 threshold at his/her discretion and on written notice to the Contractor. If the DHS S&T Technical Representative consents to such purchase, such item shall become the property of DHS. The Contractor will maintain any such items according to currently existing property accountability procedures. The DHS S&T Technical Representative will determine the final disposition of any such items.

7. Funding Requirements.

DHS will provide funding to the Contractor in accordance with DHS appropriations and available funds pursuant to the allocation outlined below:

8. Security Requirements.

- a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
- b. The Contractor shall be required to have a facility security clearance at the secret level and all key personnel shall be required to have a current secret level security clearance.
- c. If classified work is required under this SOW, DHS will provide specific guidance to the Contractor as to which work will be conducted in a classified manner and at which classification level. The Contractor will also adhere to other applicable Government orders, guides, and directives pertaining to classified or confidential work. This SOW may require access to information at the Secret level and within the following category National Security Information, Restricted Data [RD], and Formerly Restricted Data [FRD].

- d. Security Requirements (August 1996)
 - a. This clause applies to the extent that this contract involves access to information classified Secret level.
 - b. The Contractor shall comply with—
 - i. The Security Agreement (DD Form 441), including the National Industrial Security Program Operating Manual (DoD 5220.22-M); and
 - ii. Any revisions to that manual, notice of which has been furnished to the Contractor.
 - c. If, subsequent to the date of this contract, the security classification or security requirements under this contract are changed by the Government and if the changes cause an increase or decrease in security costs or otherwise affect any other term or condition of this contract, the contract shall be subject to an equitable adjustment as if the changes were directed under the Changes clause of this contract.
 - d. The Contractor agrees to insert terms that conform substantially to the language of this clause, including this paragraph (d) but excluding any reference to the Changes clause of this contract, in all subcontracts under this contract that involve access to classified information.

IV. Points of Contact

Battelle Points of Contact (POCs) are as follows:

Contracting POC

(b) (6) Contracting Officer
Battelle
505 King Ave.
Columbus, OH 43201
Tel: (b) (6)
Fax: (b) (6)
Email: (b) (6)

Technical POC(s)

Technical POC(s) –
(b) (6)
Battelle Memorial Institute
2900 Fire Road
Egg Harbor Twp, NJ 08234
Telephone- (b) (6)
(b) (6)

Battelle may change the individual designated as a POC upon notice to DHS S&T of such change.

The DHS POCs are as follows:

DHS S&T Contracting Officer

Kevin C. Dillon
William J. Hughes Technical Center
(b)(2) (b)(6)
Atlantic City International Airport, NJ 08405
Tel: (b)(2) (b)(6)
Fax: 609-383-1973
(b)(2) (b)(6)

DHS S&T COTR

Sharon Moore
William J. Hughes Technical Center
(b)(2) (b)(6)
Atlantic City International Airport, NJ 08405
Tel: (b)(2) (b)(6)
Fax: 609-383-1973
(b)(2) (b)(6)

DHS S&T Invoicing

U.S. DHS, ICE
Attn: S&T EXD Invoice
Burlington Finance Center
P.O. Box 1000
Williston, VT 05495-1000
ST.Invoicing@hq.dhs.gov

DHS S&T may change the individual designated as a POC upon notice to ATC of such change.

Statement of Work

Rail Car TIH Mitigation Project TIH Mitigation Technology Cost Benefit Analysis Tool Development

**U.S. Department of Homeland Security
Science and Technology Directorate
Infrastructure and Geophysical Division
Transportation Security Laboratory**

PR#: RSIG-10-00066

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Science and Technology Directorate (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Infrastructure and Geophysical Division (IGD) of S&T supports this effort with the Response and Recovery Technologies Program. The DHS Transportation Security Laboratory (TSL), Mitigation and Response Systems Division, is supporting IGD in executing the Rapid Response and Recovery, Rail Car Mitigation Technology Integration Project under the Response and Recovery Technologies Program.

This effort's funding will be used to support the Rapid Response and Recovery, Rail Car Mitigation Technology Integration Project under the Response and Recovery Technologies Program. The objective of this effort is to build upon prior development an analytical tool with which to conduct a rigorous cost-benefit assessment of potential rail car Toxic Inhalation Hazard (TIH) release mitigation technologies and methodologies. A key aspect of this effort will be close cooperation and coordination with existing rail and chemical industry partners. Refinements to the previously developed cost benefit analysis tool and subsequent results will complement associated project efforts currently underway related to development and assessment of TIH mitigation technologies that will reduce or eliminate the release of TIH materials from rail cars that have been subjected to intentional assault. The Mitigation and Response Systems Division of DHS/TSL is supporting IGD in executing the project.

Battelle and its subcontractors, working in close collaboration with private sectors (chemical industry and rail car manufacturers), shall be responsible for identifying and gathering data relevant to development and population of the TIH mitigation technology cost benefit analysis tool.

Distribution is authorized to U.S. government agencies only. Contains information that may be exempt from public release under the Freedom of Information Act. Before this SOW is released to the public, approval is required by the Department of Homeland Security Directorate of Science and Technology.

II. Scope of Work

Battelle will perform the tasks described in this statement of work (SOW):

The objective of this effort is to further develop an analytical tool with which to conduct a rigorous cost-benefit assessment of potential rail car Toxic Inhalation Hazard (TIH) release mitigation technologies and methodologies.

There is one major task for this SOW:

Task 1: Update existing rail car TIH release mitigation CBA via incorporation of mitigation technology cost data generated as a result of FY09 and FY10 efforts of project performers and partners, pertaining to mitigation technology development (Primarily DHS funded efforts and any pertinent results from the private Industries Advanced Tank Car Collaborative Research Project (ATCCRP)). Analyses will be conducted for hardening and self-sealing countermeasures using the CBA Tool based on lifecycle cost data and data quantifying the probability of puncture and resulting hole-size as it becomes available. Updates to the tool itself may be implemented as insights are gained during its use with emphasis on generating cost estimates over the life cycle.

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Battelle shall perform the tasks described in this SOW

Program Element / Project	Major Tasks	Key Milestones and Deliverables
<p>Develop an analytical tool with which to conduct a rigorous cost-benefit assessment of potential rail car Toxic Inhalation Hazard (TIH) release mitigation technologies and methodologies.</p>	<p>Research, analyze, and prepare an initial program plan</p>	<p>30 days after award of contract – Draft Program Plan; Final 15 days after receipt of Sponsors comments</p>
	<p>Task 1: Update existing rail car TIH release mitigation CBA via incorporation of mitigation technology cost data generated as a result of FY09 and FY10 efforts pertaining to mitigation technology development (Primarily DHS funded Battelle efforts and any pertinent results from ATCCRP). Analyses will be conducted for hardening and self-sealing countermeasures using the CBA Tool based on</p> <ol style="list-style-type: none"> 1. Lifecycle cost data and 2. Data quantifying the probability of puncture and resulting hole-size as it becomes available. <p>Updates to the tool itself may be implemented as insights are gained during its use.</p>	<p>5 Months – Updated CBA tool taking into consideration new technologies developed as a result of FY09 and FY10 hardening and self-sealing countermeasures effort</p> <p>10 Months – Further updated CBA tool taking into consideration new technologies developed as a result of FY10 hardening and self-sealing countermeasures effort</p> <p>12 Months – Final CBA tool</p>

Personnel provided by Battelle will have the skills and technical background necessary to successfully complete the tasks described in this SOW, including, but not limited to, the following:

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- Knowledge and experience in TIH release mitigation technologies such as blast and fragment penetration resistant materials, self-sealing technologies, chemical process changes, perimeter protection technologies, puncture detection/alert technology (including resultant response actions), etc.
- Knowledge and experience in cost benefit analysis tool development.
- Knowledge and experience in cost benefit analysis on mitigation technologies.
- Knowledge in Toxic Inhalation Hazard materials and TIH rail car design and operation aspects.

III. Other Contract Details

1. **Period of Performance.** The period of performance for this SOW is 12 months from contract award date. DHS may give subsequent extension notices to Battelle in writing for further performance in accordance with the terms of this SOW.
2. **Travel.** Travel may be required in the performance of the duties listed herein. It is anticipated that travel will be limited to a variety of locations including; Washington DC and Vicinity, Atlantic City International airport, as well as a variety of TIH rail car manufacturer CONUS locations. The DHS S&T Contracting Officer's Technical Representative (COTR) must approve all additional travel. All travel and other direct costs associated with the execution of the tasks indicated in this SOW will be reimbursed in accordance with the limits set forth in the Federal Travel Regulations, provided the performer provides appropriate supporting documentation.
3. **DHS-Furnished Information.**
 - a. DHS will provide certain DHS information, materials, and forms unique to DHS to Battelle to support certain tasks under this SOW.
 - b. The DHS S&T COTR identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
 - c. Battelle will prepare any documentation according to the guidelines provided by DHS.
 - d. Mitigation technology lifecycle cost data and data quantifying the probability of puncture and resulting hole-size generated or obtained from FY09 and FY10 efforts.
4. **DHS-Furnished Facilities, Supplies, and Services.** If work at DHS-provided facilities is necessary for the services being performed under this SOW, such facilities will be provided at S&T's office in Washington, D.C. Parking facilities are not provided, however several commercial parking facilities are located near S&T's office. Basic facilities such as work space and associated operating requirements (e.g., phones, desks, utilities, desktop computers, and consumable and general purpose office supplies) will be provided to Battelle personnel working in S&T's office.

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5. **Place(s) of Performance.** Battelle will perform the work under this SOW at its facilities.
6. **DHS-Furnished Property.** DHS property will not be provided to Battelle unless otherwise agreed in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$5,000 that is required to support technical tasks performed pursuant to this SOW, Battelle shall obtain the DHS S&T COTR's prior written consent. The DHS S&T COTR may lower or raise the aforementioned \$5,000 threshold at his/her discretion on written notice to Battelle. If the DHS S&T COTR consents to such purchase, such item shall become the property of DHS. Battelle will maintain any such items according to currently existing property accountability procedures. The DHS S&T COTR will determine the final disposition of any such items.

7. **Deliverables.** Battelle will provide all deliverables identified in this SOW directly to the DHS S&T COTR and DHS S&T Contracting Officer with a copy of the transmittal letter to the Financial Analyst.
8. **Technical Interchange Meetings and Program reviews.** Battelle will participate in Technical Interchange Meeting (TIM) midway through Tasks 1, 2, and 3 and Program Reviews (PR) at the completion of these tasks. Battelle may be asked to participate in TIMs and PRs at other times as requested by the DHS S&T COTR.
9. **Program Status Report.** Battelle will deliver a monthly program status report to the DHS S&T COTR, DHS S&T Explosives Business Operations Manager, and DHS S&T Financial Analyst on the 15th day of each month containing metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment information of all work performed hereunder. This document will describe the previous 30 calendar days' activity, technical progress achieved against goals, difficulties encountered, recovery plans (if needed), plans for the next 30 calendar day period, and financial status.
10. **Invoices.** Battelle will deliver a monthly invoice to ST.Invoicing@hq.dhs.gov on the 15th day of each month.
11. **Funding Requirements.** DHS will provide funding to Battelle in accordance with DHS's appropriations and available funds.

12. Security Requirements.

- a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
- b. If classified work is required under this SOW, DHS will provide specific guidance to Battelle as to which work will be conducted in a classified manner and at which

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classification level. Battelle will also adhere to other applicable Government orders, guides, and directives pertaining to classified or confidential work. This SOW will require access to classified information.

IV. Points of Contact

Battelle Points of Contact (POCs) are as follows:

Financial POC

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Technical POC(s)

(b) (6)
Principal Investigator
Battelle Memorial Institute – Atlantic City
2900 Fire Road Suite 201
Egg Harbor Township, NJ 08234
(b) (6)

Battelle may change the individual designated as a POC upon notice to DHS S&T of such change.

The DHS POCs are as follows:

DHS S&T Contracting Officer

Kevin C. Dillon
William J. Hughes Technical Center
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Atlantic City International Airport, NJ 08405
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DHS S&T COTR

Sharon Moore

William J. Hughes Technical Center

(b)(2) (b)(6)

Atlantic City International Airport, NJ 08405

Tel: (b)(2) (b)(6)

Fax: 609-383-1973

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DHS S&T Invoicing

U.S. DHS, ICE

Attn: S&T EXD Invoice

Burlington Finance Center

P.O. Box 1000

Williston, VT 05495-1000

ST.Invoicing@hq.dhs.gov

DHS S&T may change the individual designated as a POC upon notice to ATC of such change.

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Statement of Work for Regional Jet (RJ) Vulnerability Assessment

U.S. Department of Homeland Security Science and Technology Directorate Explosives Division

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Science and Technology Directorate (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Transportation Security Administration (TSA) supports this effort through the RJ Vulnerability Assessment Program. The Department of Homeland Security (DHS) Transportation Security Laboratory (TSL), Mitigation and Response Systems Division, is supporting TSA in executing the RJ Vulnerability Assessment Program.

The purpose of this action is to modify existing contract #HSHQDC-09-F-00043 for the tasking described below.

II. Scope of Work

Battelle will perform the following tasks for this SOW:

Task 1: Aircraft Field Testing

a. Site Preparation - Battelle shall travel to Aberdeen Proving Ground (APG), MD to complete pre-test site preparation, specifically to prepare and paint the regional jet aircraft test articles / substructures / witness panels and to assemble and calibrate the Digital Image Correlation System (IC). This system is used to measure blast-induced regional jet aircraft skin deformation by enabling the quantitative measurement of in-plane and out-of-plane displacement over the aircraft skin / substructure / witness panel surface in each high-speed photographic frame. For the IC system, two high speed cameras are precisely placed and then focused on the aircraft / substructure / witness panel surface which Battelle shall paint with a random, high contrast speckle pattern.

b. Data Analysis - Immediately post-test, Battelle shall process each pair of simultaneous digital images acquired during the blast event using pattern recognition software so that each painted point on the aircraft test surface can be correlated between the two digital images. The pattern recognition process results in a one-to-one mapping of surface positions in the first image to corresponding subsequent positions. This allows the measurement of the aircraft / substructure / witness panel surface displacement from the pre-blast, undeformed reference

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condition. These extremely precise measurements provide useful blast response data including in-plane aircraft skin surface strain and radial deflection.

c. Reporting - Battelle shall provide technical reports for all substructure, regional jet aircraft explosive tests. Test reports shall include findings and an analysis of the IC data collected during the tests.

Task 2: Explosive Equivalence Testing

a. Battelle will develop the test plan and support the conducts of explosive equivalence testing using shockhole test fixtures, witness panel fixture, simulated flat RJ fuselage panels, and RJ fuselage panels located in Aberdeen Test Center using TSL high speed camera systems.

b. Battelle will conduct data analyses with collected digital image correlation data, high speed videos, and other measurement data.

c. Battelle will develop and provide test reports to document the findings through the explosive equivalence testing and subsequent data analyses.

III. Key Milestones and Deliverables

Program Element / Project	Major Sub-Tasks	Key Milestones and Deliverables
Task 1: Aircraft Field Testing and Site Preparation	<ul style="list-style-type: none"> • Site Preparation: <ul style="list-style-type: none"> -Prepare substructure / witness panels (1-2 months after award) -Prepare unpressurized aircraft test articles (4-6 months after award) -Prepare pressurized aircraft test articles (7-8 months after award) • IC Data Analysis / Reporting: <ul style="list-style-type: none"> -Analyze data / prepare reports for substructure/ witness panels (2 months after award) • IC Data Analysis / Reporting: 	<p>2 months after award– Substructure / Witness panel IC Reports</p> <p>6 months after award– Unpressurized Aircraft Test Article IC Reports</p> <p>8 months after award– Pressurized Aircraft Test Article IC Reports</p>

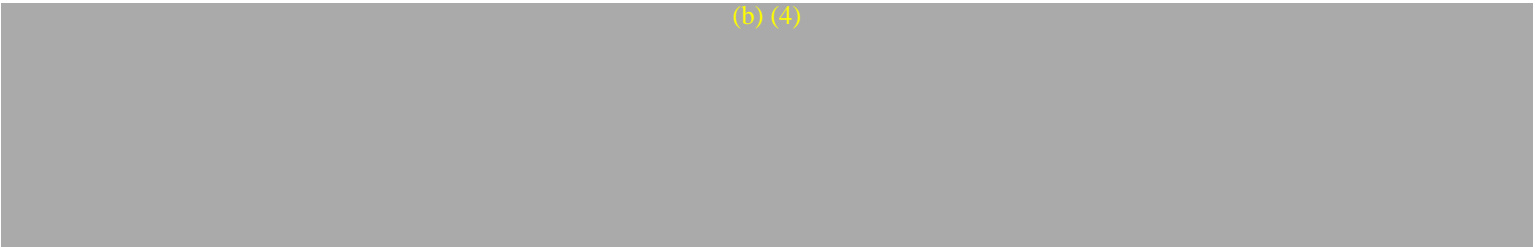
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Program Element / Project	Major Sub-Tasks	Key Milestones and Deliverables
	<ul style="list-style-type: none"> -Analyze data / prepare reports for unpressurized aircraft test articles (6 months after award) • IC Data Analysis / Reporting: • -Analyze data / prepare reports for pressurized aircraft test articles (8 months after award) 	
Task 2: Explosive Equivalency Testing	<ul style="list-style-type: none"> • Develop Test Plan • Conduct Explosive Equivalence Testing • Conduct Data Analyses • Develop Test Report 	<ul style="list-style-type: none"> 1 month before test dates – Test Plans 1 month after the tests – Test Reports

IV. Project Timeline

Below is a summary of the tasking timeline for this effort:

Project Timeline



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V. Other Contract Details

- A. Period of Performance.** The period of performance for this SOW is from the contract award date to 12 months after the award date. DHS may give subsequent extension notices to Battelle Memorial Institute in writing for further performance in accordance with the terms of this SOW.
- B. Travel.** Travel may be required in the performance of the duties listed herein. It is anticipated that travel will be limited to Aberdeen Proving Ground, Aberdeen, Maryland. The DHS S&T COTR must approve all additional travel. All travel and other direct costs associated with the execution of the tasks indicated in this SOW will be reimbursed in accordance with the limits set forth in the Federal Travel Regulations, provided the performer provides appropriate supporting documentation.
- C. DHS-Furnished Information.**
1. DHS will provide certain DHS information, materials, and forms unique to DHS to Battelle Memorial Institute to support certain tasks under this SOW.
 2. The DHS S&T COTR identified in this SOW shall be the point of contact (POC) for identification of any required information to be supplied by DHS.
 3. Battelle Memorial Institute will prepare any documentation according to the guidelines provided by DHS.
- D. DHS-Furnished Facilities, Supplies, and Services.** If work at DHS-provided facilities is necessary for the services being performed under this SOW, such facilities will be provided at S&T's office in Washington, DC. Parking facilities are not provided, however several commercial parking facilities are located near S&T's office. Basic facilities such as work space and associated operating requirements (e.g., phones, desks, utilities, desktop computers, and consumable and general purpose office supplies) will be provided to Battelle Memorial Institute personnel working in S&T's office.
- E. Place(s) of Performance.** Battelle Memorial Institute will perform the work under this SOW at the Explosives Effects Laboratory at the William J. Hughes Technical Center and Aberdeen Proving Grounds, Aberdeen, Maryland.
- F. DHS-Furnished Property.** DHS property will not be provided to Battelle Memorial Institute unless otherwise agreed in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$50,000 that is required to support technical tasks performed pursuant to this SOW, Battelle Memorial Institute shall obtain the DHS S&T COTR's prior written consent. The DHS S&T COTR may lower or raise the aforementioned \$50,000 threshold at his/her discretion on written notice to

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Battelle Memorial Institute If the DHS S&T COTR consents to such purchase, such item shall become the property of DHS. Battelle Memorial Institute will maintain any such items according to currently existing property accountability procedures. The DHS S&T COTR will determine the final disposition of any such items.

G. Deliverables. Battelle Memorial Institute will provide all deliverables identified in this SOW directly to the DHS S&T COTR and DHS S&T Contracting Officer with a copy of the transmittal letter to the Financial Analyst.

H. Program Status Report. Battelle Memorial Institute will deliver a monthly program status report to the DHS S&T COTR, DHS S&T Explosives Business Operations Manager, and DHS S&T Financial Analyst on the 15th day of each month containing metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment information of all work performed hereunder. This document will describe the previous 30 calendar days' activity, technical progress achieved against goals, difficulties encountered, recovery plans (if needed), plans for the next 30 calendar day period, and financial status. The length of the report is not to exceed one page.

I. Invoices. Battelle Memorial Institute will deliver a monthly invoice to ST.Invoicing@hq.dhs.gov on the 15th day of each month.

J. Funding Requirements. DHS will provide funding to Battelle Memorial Institute in accordance with DHS's appropriations and available funds.

K. Security Requirements.

1. All work performed under this SOW is unclassified unless otherwise specified by DHS.
2. If classified work is required under this SOW, DHS will provide specific guidance to Battelle Memorial Institute as to which work will be conducted in a classified manner and at which classification level. Battelle Memorial Institute will also adhere to other applicable Government orders, guides and directives pertaining to classified or confidential work. This SOW may require access to information at the Secret

VI. Points of Contact

Battelle Points of Contact (POCs) are as follows:

Contracting POC

(b) (6) Contracting Officer
Battelle
505 King Ave.

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Columbus, OH 43201

Tel: (b) (6)

Fax: (b) (6)

Email: (b) (6)

Technical POC(s)

Technical POC(s) –

(b) (6)

Battelle Memorial Institute

2900 Fire Road

Egg Harbor Twp, NJ 08234

Telephone- (b) (6)

(b) (6)

Battelle may change the individual designated as a POC upon notice to DHS S&T of such change.

The DHS POCs are as follows:

DHS S&T Contracting Officer

Kevin C. Dillon

William J. Hughes Technical Center

(b)(2) (b)(6)

Atlantic City International Airport, NJ 08405

Tel: (b)(2) (b)(6)

Fax: 609-383-1973

(b)(2) (b)(6)

DHS S&T COTR

Sharon Moore

William J. Hughes Technical Center

(b)(2) (b)(6)

Atlantic City International Airport, NJ 08405

Tel: (b)(2) (b)(6)

Fax: 609-383-1973

(b)(2) (b)(6)

DHS S&T Invoicing

U.S. DHS, ICE

Attn: S&T EXD Invoice

Burlington Finance Center

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P.O. Box 1000
Williston, VT 05495-1000
ST.Invoicing@hq.dhs.gov

DHS S&T may change the individual designated as a POC upon notice to ATC of such change.

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**Statement of Work for
Bulk Explosives Detection Research and Laboratory Support
Directorate of Science and Technology
U.S. Department of Homeland Security
Transportation Security Laboratory**

One task funded by 3 PRs

RSLF-08-00084

RSLF-08-00103

RSLF-08-00109

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Science and Technology Directorate (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland.

The bulk explosives detection program has been developing technologies covering a broad array of nondestructive inspection technologies. The DHS is responsible for securing the nation's transportation system against terrorist or other criminal intent. Inspection technologies are being deployed worldwide to fight the war against terrorism. These technologies are in need of improvement or alternatives.

The Transportation Security Laboratory (TSL), located at the Federal Aviation Administration (FAA) W.J. Hughes Technical Center, is a center for explosives detection research, engineering, development, test and evaluation. The Bulk Explosives Detection Research Laboratory (referred to as the BDL) was formed and equipped to perform unique research and support development, evaluation and deployment of bulk non-intrusive inspection and explosives (or other chemical) detection methods.

Contractor support is required to perform the mission of the BDL. The work requirements are covered in this statement of work.

II. Scope of Work

The scope of this statement of work is defined by the following general task areas that the contractor shall perform.

The scope of this SOW includes, but is not limited to, the following activities:

- Applied research and advanced concept feasibility studies;

- Laboratory equipment operations, maintenance, data collection and experimentation;
- Scientific, engineering, and test and evaluation support;
- Development and execution of standard operating procedures;
- Quality control, storage, and inventory tracking of raw materials, data collection samples, and laboratory supplies;
- Purchase of equipment and consumables, including service contracts and gases;
- Documentation and publication of procedures, methods, data and findings;
- Data storage, maintenance, and retrieval;
- Cooperation with US national laboratories and other government agencies, industrial partners and international partners; and
- Conduct of tours of the BDL.

Requirements

1. Applied Research and Advanced Concept Feasibility Studies

1.1 The contractor shall investigate new concepts or technologies in bulk explosives detection as directed. For each investigation, the government will provide technical direction, and the contractor shall provide a project plan within 10 working days of receipt of technical direction. Once approval of the project plan is obtained, the contractor shall execute the study in accordance with the project plan.

To date, studies that are ongoing include the following:

- X-ray Scattering and Fluorescence
- X-ray Microtomography and High-Resolution Imaging
- Image Resolution and Artifact Study
- Film Bag Study
- Novel Methods Research.

1.2 Reporting– The contractor shall prepare technical quick-look reports and/or formal reports for all applied research and advanced concept feasibility studies designated under this task. Quick-look reports shall be provided at mutually agreeable intervals to convey the results of major data collection or analysis, 10 working days following completion of the data collection or analysis. The contractor shall provide a final technical report or technical note for each study, subject to the government’s approval of the outcome. If the outcome is unsatisfactory to the government (e.g. errors are discovered or analysis is incomplete), the final report will be deferred until such time that the outcome is satisfactory. If the study exceeds six months, then the contractor shall provide additional technical reports, according to a schedule set forth in the project plan.

2. Characterization of Explosives and Other Materials

The contractor shall utilize available computerized tomography equipment (including government-owned certified EDS), x-ray projection devices, and BDL equipment, to obtain data and maintain a database on the x-ray attenuation, effective atomic number, elemental composition, angular dispersive and energy dispersive x-ray diffraction, and microscopic signatures of materials as directed. The contractor shall perform false alarm studies and purchase items in coordination with the government to perform false alarm materials characterization.

3. **General Technical Support**

The contractor shall provide engineering/technical expertise in support of the TSL or other customers in the following areas: x-ray imaging, computed tomography, x-ray diffraction, x-ray fluorescence, microscopy, process tomography, x-ray spectroscopy, image processing, data fusion, dual-energy x-ray imaging, texture analysis, materials chemistry, and other areas as appropriate to meet the needs of the BDL mission. This may require collaboration with scientists from, and infrequent travel to, other institutions.

The contractor shall provide support in obtaining, analyzing and processing data as needed, that includes using equipment onsite at the TSL, using data provided from other sources, or possibly performing work at off-site locations.

The contractor shall provide support to test and evaluation by preparing specialized test articles in accordance with government requests.

4. **Design of Experiments**

The contractor shall design experiments, studies and tests in accordance with standard approaches to experimental design, particularly with respect to error analysis, although novel approaches are acceptable. The contractor shall design experiments, studies and tests with the following measurement objectives:

Minimum Confidence Level ($1-\alpha$): 90%

Minimum Power ($1-\beta$): 80%

The contractor shall review all experiment designs with the government prior to the start of experimental data collection.

5. **BDL Operations**

General Laboratory Operations

The “Bulk Detection Laboratory” facility includes the following areas that are altogether referred to as the BDL or “the facility”:

Laboratory and office area on the north side of building 318 (the bulk lab)

Laboratory and office area in the central area of building 318 (318 Warehouse, HEXRAY lab).

The contractor shall manage the operations of the facility and maintain a neat, safe and orderly facility consistent with standard good laboratory practices, with the oversight of the Bulk Explosives/Weapons Detection Technology Lead.

The contractor shall ensure that the facility is staffed and able to respond to technical inquiries a minimum of 32 hours per week during regular working hours (regular hours are considered 9 am to 4 pm weekdays). The contractor shall conduct tours of the BDL on an as-needed basis. NOTE: off-hours work will be considered on a case-by-base basis.

The contractor shall generate and maintain a master laboratory logbook and schedule that includes a record and plan of meetings, contacts, project milestones, data collection, maintenance, tours, problems, and any other pertinent information.

The contractor shall generate and maintain a logbook for each major data collection/test equipment. This notebook must be kept in the lab at all times and remains property of the TSL.

The contractor shall attend monthly meetings to discuss the status of ongoing projects, future projects, schedules, issues and other pertinent information. The contractor shall attend impromptu or other meetings as requested.

The contractor shall assist in procuring all materials, supplies, equipment, software and services for the BDL. This shall include helping to prepare specifications, lists of qualified equipment/vendors and purchase orders.

The contractor shall implement all quality control and safety processes with the approval of the TSL. The contractor shall maintain Material Safety Data Sheets (MSDS) for all chemicals, test items and other materials that are located in the BDL, as required by the TSL safety officer. The contractor shall work in a safe manner with hazardous materials including but not limited to energetic materials, acids, bases and peroxides. The contractor shall represent the BDL at the monthly TSL Safety Steering Committee meeting. The TSL will supply all necessary dosimeters.

BDL Network and Electronic Data Storage

The contractor shall develop and/or maintain a network and electronic data storage facility that is capable of backing up and storing all electronic data collected or otherwise provided to the BDL. This network shall not be connected to the current DHS/TSL network and the contractor shall take measures to prevent loss of data (e.g. tape backup).

Only those persons who have been approved by the government will have access to the BDL data network.

Equipment, Calibration and Maintenance

The contractor shall ensure that all experimental and test apparatus are maintained according to manufacturer recommendations and kept in operational status at all times, including, but not limited to:

- Rigaku Miniflex diffractometer,
- Philipps X-PERT Pro diffractometer,
- SkyScan X-ray microtomograph,
- Phoenix v-Tome-x X-ray microtomograph,
- Perkin Elmer Elemental Analyzer 2400 Series II,
- Custom-made energy-dispersive diffractometer (HAMSCAN), and
- Custom-made 150/320 KeV CT/DR X-ray system (HEXRAY)
- Instron universal testing machine.

The contractor shall assist in arranging for repairs and other service necessary to keep laboratory equipment in good working order. The contractor shall acquire any maintenance contracts required for the BDL equipment, shall keep all maintenance agreements up to date, and shall perform all regular maintenance outside of any service agreements with the manufacturers.

The contractor shall recommend upgrades to all equipment (including software applications) and shall assist the government in obtaining upgrades.

Sample Preparation, Storage and Disposal

The contractor shall prepare material samples to obtain optimal data on laboratory devices, as appropriate to the specific data collection device. These materials include but are not limited to solid minerals, metals, plastics, rubbers, putties, gels, liquids, slurries, emulsions, and powders. Samples will include perishable and nonperishable items, commercial items, foodstuffs, etc.

The contractor shall track, store and control sample materials in both their “raw” form and in “processed” form. The raw form is the material as originally obtained and “processed” forms are the samples prepared for experiments in the laboratory apparatus. The contractor shall ensure that all samples are maintained at optimum temperature and humidity to maximize sample lifetime, and shall dispose of samples appropriately. The contractor shall store samples in sealed containers and in such a way as to minimize the likelihood of infestation or rodents

Explosives samples shall be acquired and stored in coordination with TSL explosives experts and in compliance with TSL explosives safety protocols.

Development of Standard Operating Procedures (SOPs)

The contractor shall develop and maintain standard operating procedures for safety, quality control, sample preparation, equipment operation, maintenance, etc. The primary purposes

for developing standards are to: 1) standardize procedures to ensure repeatable scientific results, 2) provide instruction for personnel unfamiliar with the procedures, and 3) maximize safety. These procedures shall comply with applicable standards, including, but not limited to ASTM, NIST, manufacturer-recommended, and TSL safety procedures, but without being redundant. Procedures shall be documented electronically and a hardcopy set of procedures shall be readily available in the laboratory at all times. Procedures and operating manuals applicable to specific equipment shall be kept in close proximity to where the work shall be accomplished.

Deliverables

1. Weekly Activity Report

The contractor shall provide concise activity reports of the work done on a weekly basis to the technical monitor, in electronic form. This report shall cover: Progress made on current tasks, problems encountered, possible future problems, tours or demonstrations, meetings attended, planned purchases, materials received, or other relevant information. Weekly reports shall be provided by close of business on Monday of the following week (or Tuesday for federal holidays).

2. Monthly Technical Progress Report

The contractor shall provide a monthly technical progress report by the 15th of each month, according to the omnibus contract, as well as including the following areas:

- Status of all on-going projects , studies, and tasks including findings, schedule and problems,
- Status of Lab Operations including Lab equipment operability, maintenance, problems, calibration,
- Record of tours or demonstrations,
- Technical meetings attended,
- Sample/Test article/Materials/supplies inventory,
- Reporting /Documentation reviewed or delivered.

3. Standard Operating Procedures (SOPs)

As they are developed, the contractor shall deliver and maintain a record of all SOPs and modifications in both hard copy and electronic format.

4. Network and Data Archives

The contractor shall provide new network hardware, and shall provide/maintain all data obtained previously and during the course of the work. Data shall be provided to the government with unlimited rights.

5. Technical Reports

The contractor shall periodically deliver formal reports or quick look reports (QLRs), in DHS format, as called for in this SOW. At the request of the government, the contractor shall also provide information/documents/reports for outside publications.

III. Other Contract Details

1. **Period of Performance.** The period of performance for incremental funding provided with this SOW is from the contract award date for twelve (12) months with the option for 6 additional months. DHS may give subsequent extension notices to the contractor in writing for further performance in accordance with the terms of this SOW.
2. **Travel.** Travel may be required to locations such as Tyndall Air Force Base, Panama City, Florida, Lawrence Livermore National Laboratory, Livermore, CA, or other facility to assist in data collection. Travel may be required to attend meetings in Washington, DC or other location. Travel may be required to conferences or training. Prior COTR approval is required for all travel.
3. **DHS-Furnished Information.**
 - a. DHS will provide certain DHS information, materials, and forms unique to DHS to the contractor to support certain tasks under this SOW.
 - b. The DHS COTR identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
 - c. The contractor will prepare any documentation according to the guidelines provided by DHS.
4. **DHS-Furnished Facilities, Supplies, and Services.** The contractor shall utilize available equipment (including government-owned certified EDS), x-ray devices, and other Bulk Detection Laboratory (BDL) equipment. The government will provide the contractor with relevant and available documents that are requested by the contractor.
5. **Place of Performance.** The contractor shall perform work under this SOW at the BDL established at the TSL. Relatively infrequent travel to other facility designated by DHS may be required.
6. **DHS-Furnished Property.** DHS property will not be provided to the contractor unless otherwise agreed in a task order issued under this SOW. In such instances, DHS will maintain property records. The contractor will be provided with office space for a minimum of six full-time personnel at the TSL. The contractor will be provided with DHS network-connected computers and telephones.

Before purchasing any individual item equal to or exceeding \$500 that is required to support technical tasks performed pursuant to this SOW, the contractor shall obtain the DHS COTR

prior written consent. The DHS COTR may lower or raise the aforementioned \$500 threshold at his/her discretion and on written notice to the contractor. If the DHS COTR consents to such purchase, such item shall become the property of DHS. The contractor shall maintain any such items according to currently existing property accountability procedures. The DHS COTR will determine the final disposition of any such items.

7. **Deliverables.** The contractor shall provide all deliverables identified in this SOW directly to the DHS COTR with a copy of the transmittal letter to the Contracting Officer.
8. **Program Status Report.** The contractor shall deliver a monthly program status report to the DHS COTR according to the requirements outlined in the omnibus statement of work and must contain metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment information of all work performed hereunder.
9. **Funding Requirements:** DHS will provide funding to the Contractor in accordance with DHS's appropriations and available funds.
10. **Security Requirements.**
 - a. All work performed under this SOW is unclassified unless otherwise specified by DHS. All other security requirements are specified in the omnibus statement of work.
 - b. If classified work is required under this SOW, DHS will provide specific guidance to the contractor as to which work will be conducted in a classified manner and at which classification level. . The contractor shall also adhere to other applicable Government orders, guides, and directives pertaining to classified or confidential work. This SOW requires access to information up to the Secret level. The contractor shall comply with applicable DHS Security Classification Guides for explosives detection and Homemade Explosives. All personnel shall have active Secret security clearance.

IV. Points of Contact

DHS Points of Contact

Contracting Officer: Kevin Dillon, (b)(2) (b)(6)

COTR: Sharon Moore, (b)(2) (b)(6)

Technical Monitor: Ronald Krauss, Ph.D (b)(2) (b)(6)

Department of Homeland Security
Transportation Security Laboratory
William J Hughes Technical Center, Building 315
Atlantic City, NJ 08405

Statement of Work for Automation Effects on Weapons Detection

**Directorate of Science and Technology
U.S. Department of Homeland Security
Transportation Security Laboratory
Human Factors Program
TSL-08-021**

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Human Factors Program supports this effort by investigating the issues that arise when automation and human decision making interface.

As part of the effort to improve our overall ability to prevent calamitous incidents using explosive threats, entities within DHS, particularly TSA, have looked to enhance explosive detection at aviation checkpoints by fielding explosive detection automation. This research project will look at the performance costs and benefits of such automation consistent with the aviation screening mission.

II. Scope of Work

The contractor will perform the tasks described in this SOW:

The objective of this task is to design, carry out, analyze, and report on a laboratory study to examine the effects of automated alerts upon the detection of:

- 1) explosives which the current algorithm fails to detect and
- 2) other prohibited items

The contractor will design a study to compare the performance of a baseline system (i.e, automated detection off) to the identical hardware with automated detection turned on, the standard configuration. The baseline and standard conditions will consist of images of checkpoint items, including some images which include explosive threats and other prohibited items. The central questions that the study will answer are:

- 1) What is the detection performance of the screeners alone versus the screeners using automated alerts within the regions of interest defined by the automation?
- 2) What is the detection performance of the screeners alone, and screeners using automated alerts, within areas of the image outside of the regions of interest defined by the automation?
- 3) How are these results reflected as a function of the category of threat (Advanced Technology (AT) sensitive, AT insensitive, other prohibited item)?
- 4) What is the effect of the presence of automation on the overall efficiency of the screening processes?

Deliverables

To accomplish this task:

- 1) The contractor will deliver a project plan within 14 days of task award.
- 2) The contractor will deliver a Test and Evaluation Plan within 60 days of task award.
- 3) The contractor will deliver a Test and Evaluation Report within 30 days of the completion of data collection.

III. Other Contract Details

1. **Period of Performance.** The period of performance for this SOW is from the task award date to 12 months following. DHS may give subsequent extension notices to the contractor in writing for further performance in accordance with the terms of this SOW.
2. **Travel.** Travel may be required for data collection if screeners cannot be obtained locally. All travel requirements will be described in the project plan and will comply with Federal Travel Regulations.
3. **DHS-Furnished Information.**
 - a. DHS will provide certain DHS information, materials, and forms unique to DHS to the contractor to support certain tasks under this SOW.
 - b. The DHS COTR identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
 - c. The contractor will prepare any documentation according to the guidelines provided by DHS. Document templates will be provided.

4. **DHS-Furnished Facilities, Supplies, and Services.** DHS will provide a collection of test images and facilities for testing screeners.
5. **Place of Performance.** The contractor will perform the work under this SOW at their offices. As stated above, the contractor will perform certain work under this SOW at a federal government facility designated by DHS.
6. **DHS-Furnished Property.** DHS will provide the use of X-ray AT equipment and AT simulators as needed to accomplish this task.
7. **Deliverables.** The Contractor will provide all deliverables identified in this SOW directly to the DHS COTR with a copy of the transmittal letter to the Contracting Officer.
8. **Program Status Report.** The Contractor will deliver a monthly program status report to the DHS S&T Technical Representative and DHS S&T Resource Manager containing metrics pertaining to financial, schedule, and scope information, risk information, and performance assessment information of all work performed hereunder.
9. **Funding Requirements:** DHS will provide funding to the Contractor in accordance with DHS's appropriations and available funds.
10. **Security Requirements.** All work performed under this SOW is unclassified unless otherwise specified by DHS. All other security requirements are outlined in the omnibus statement of work.

IV. Points of Contact

The DHS POCs are as follows:

Contracting Officer:

(b)(2) (b)(6)

COTR: Sharon Moore,

(b)(2) (b)(6)

Technical Monitor: William Maguire, Ph.D

(b)(2) (b)(6)

Statement of Work
for the
Air Cargo Systems Integrated Approach Project
(Containerized Cargo Characterization)
U.S. Department of Homeland Security
Directorate of Science and Technology
Explosive Division/Transportation Security Laboratory

RSEN-07-00100

Task #

I. Background

The main objective of this project is to assess the types and quantities of air cargo processed at multiple geographically diverse U.S. air cargo facilities. A limited amount of data collection activities was conducted at the Hartsfield-Jackson Atlanta International Airport (ATL), Northern Kentucky International Airport (CVG), Miami International Airport (MIA), and San Francisco International Airport (SFO). Analysis of the cargo characterization showed regional and seasonal differences in the types, frequencies, and amounts of cargo shipped at these locations.

No data exist for cargo being shipped in south-central and northeastern airports. This project is to complete a comprehensive review of containerized cargo at major airports in these parts of the United States, as well as collecting additional data from two additional airports (one each in California and Illinois).

This project has two major goals:

- a. Conduct an extensive on-site analysis of cargo composition and commodities at multiple airports.
- b. Determine the range of differences in cargo composition and commodities as a result of airport location, airport size, and time of year.

Project activities are limited to the evaluation of the types and quantities of air cargo processed at multiple geographically diverse U.S. air cargo facilities at two different times of the year to account for seasonal fluctuations. This evaluation will examine both passenger airline cargo and all-cargo operations.

II. Scope of Work

The scope of this project is to conduct up to ten field assessments (i.e., five different airports, two different times of the year) to determine the types and quantities of containerized air cargo handled in the United States.

Technical approach. Vendor will send a team of two data collectors to each airport for a period of 5 days (3 days of data collection and 2 days of travel). During this time data collectors will record cargo arrival mode, arrival time, departure time, packaging (e.g., pallet, box), and the type of commodity (as indicated by Bill of Lading or visual inspection if possible). Random representative samples of cargo may be visually inspected to provide statistical information to characterize the air cargo at each specific site.

Reports. Vendor will provide a detailed report for each site visit outlining the location, timeframe, data collection methodology, results of the analysis, discussion, conclusion, and lessons learned. In addition, Vendor will provide a trip report for each visit outlining the dates of travel, points of contact, and a short description of the purpose and problems encountered (if any). Reports and recommendations will be reported in a mutually agreeable format between Vendor and the government. The following documents form a part of this SOW and are applicable to the extent specified herein. The latest version of these documents as of the contract award date will apply.

- Contract Security Classification Specification, DD254
- ANSI/ISO/ASQ Q9001-2000 Series - Quality Management Standards
- ISO/IEC 17025 “General Requirements for the Competence of Testing and Calibration Laboratories”

Program Element/Project	Major Tasks	Key Milestones and Deliverables
Air Cargo Systems Integrated Approach Project (Containerized Cargo Characterization)	<ul style="list-style-type: none"> • 1 month – Collect data at airport #1 (round 1) • 2 month – Collect data at airport #2 (round 1) • 3 month – Collect data at airport #3 (round 1) • 4 month – Collect data at airport #4 (round 1) • 5 month – Collect data at airport #5 (round 1) • 6 month – Collect data at airport #1 (round 2) • 7 month – Collect data at airport #2 (round 2) • 8 month – Collect data at airport #3 (round 2) • 9 month – Collect data at airport #4 (round 2) • 10 month – Collect data at airport #5 (round 2) 	<ul style="list-style-type: none"> • Test & Evaluation Report for airport #1; round 1 (1 month after data collection) • Test & Evaluation Report for airport #2; round 1 (1 month after data collection) • Test & Evaluation Report for airport #3; round 1 (1 month after data collection) • Test & Evaluation Report for airport #4; round 1 (1 month after data collection) • Test & Evaluation Report for airport #5; round 1 (1 month after data collection) • Test & Evaluation Report for airport #1; round 2 (1 month after data collection) • Test & Evaluation Report for airport #2; round 2 (1 month after data collection) • Test & Evaluation Report for airport #3; round 2 (1 month after data collection) • Test & Evaluation Report for airport #4; round 2 (1 month after data collection) • Test & Evaluation Report for airport #5; round 2 (1 month after data collection)

III. Other Contract Details

A. **Period of Performance.** The period of performance for this SOW will be 12 months from date of award. DHS may give subsequent extension notices to in writing for further performance in accordance with the terms of this SOW.

B. **Travel.**

Travel may be required in the performance of the duties listed herein. It is anticipated that travel will be limited to domestic airports, which remain undetermined until negotiations with the DHS, airport authorities, airlines, and cargo couriers take place. Targeted locations

include Dallas-Ft. Worth International Airport (DFW), Los Angeles International Airport (LAX), Chicago-O'Hare International Airport (ORD), John F. Kennedy International Airport (JFK), and Boston Logan International Airport (BOS) will be willing to host this project. The DHS S&T Technical Representative must approve all additional travel. All travel and other direct costs associated with the execution of the tasks indicated in this SOW will be reimbursed in accordance with the limits set forth in the Federal Travel Regulations, provided the performer provides appropriate supporting documentation.

C. DHS-Furnished Information.

- a. DHS will provide certain DHS information, materials, and forms unique to DHS to Vendor to support certain tasks under this SOW.
- b. The DHS S&T Technical Monitor identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
- c. Vendor will prepare any documentation according to the guidelines provided by DHS.

D. DHS-Furnished Facilities, Supplies, and Services.

DHS will not provide additional facilities as this is continuing work. DHS furnished facilities, supplies and services were provided in accordance with the contract

E. Place of Performance. Vendor will perform the majority of work under this SOW at Vendor's location and will perform a certain portion of the work under this SOW at a federal government facility designated by DHS.

F. DHS-Furnished Property. DHS property will not be provided to Vendor unless otherwise agreed in a task order issued under this SOW.

G. Deliverables. Vendor will provide all deliverables identified in this SOW directly to the DHS COTR/

H. Program Status Report. Vendor will deliver a monthly program status as stated in the contract, to the DHS COTR containing metrics pertaining to financial (Labor Rate, Material, ODC), schedule (Current and Future work), and scope information, risk information, and performance assessment information of all work performed hereunder.

I. Funding Requirements. DHS will provide funding to Vendor in accordance with DHS's appropriations and available funds..

J. Security Requirements.

1. All work performed under this SOW is unclassified unless otherwise specified by DHS.

2. If classified work is required under this SOW, DHS will provide specific guidance to Vendor as to which work will be conducted in a classified manner and at which classification level. Vendor will adhere to other applicable Government orders, guides, and directives pertaining to classified or confidential work. This SOW may require access to information at the Secret level and within the following category: National Security Information.

IV. Points of Contact

The DHS POCs are as follows:

DHS Transportation Security Laboratory
William J. Hughes Technical Center, Bldg. 315
Atlantic City International Airport, NJ 08405

- DHS Contracting Officer: Kevin Dillon, (b)(2) (b)(6)
- DHS COTR: Sharon Moore, (b)(2) (b)(6)
- DHS Technical Monitor: Michael Snyder, (b)(2) (b)(6)

Staffing and Improvements to a Laboratory for Electromagnetic Studies in
Explosives/Weapons Detection (Short title: EMXLAB)

**U.S. Department of Homeland Security
Science and Technology Directorate
Transportation Security Laboratory
RSLF-08-00115
Task #**

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Transportation Security Laboratory (TSL) supports this effort through the Next Generation Checkpoint's execution plan.

A. Scope

The scope of this project is to maintain, develop, and implement a laboratory for the purpose of acquiring electromagnetic signature data of explosives and other materials at frequencies up to 10 THz. This project, is supported by the core capability initiative for research and development, will contribute to the overall mission of the bulk explosives and weapons detection long-term research program. The scope of this project includes the following general tasks:

- Literature searches
- Preparation of plans, procedures and reports
- Adaptation of specialized laboratory spaces within existing building structures
- Development/assembly of experimental apparatus
- Design and execution of experimental studies.

B. Background

The THz region of the electromagnetic spectrum has been identified as a promising probe for detecting concealed weapons and explosives. Not only is imaging becoming a reality, but the THz frequency regime contains a number of molecular vibrational and rotational modes, leading to distinct signatures of explosives and other materials. In addition, dielectric "constant" also can be an indicator of the type of material.

An in-house capability would allow fundamental measurements with explosives and weapons that are not generally available to researchers outside specialized government laboratories. In addition to being a resource for researchers to use on a visiting basis, research performed at the TSL would provide independent verification of research claims. Further, work performed here could be shared with a wide cross section of researchers.

II.

Although some measurements have been made at various laboratories, they are not nearly as comprehensive as would be obtained at a dedicated research laboratory at the Transportation Security Laboratory (TSL). A database of dielectric and THz signatures of explosives, and innocuous materials of interest to transportation, would be invaluable.

There is renewed interest in developing fundamental measurement capability of explosives with Raman, radar, and laser spectroscopy. This information will be used to develop new technologies and increased understanding of technologies under evaluation.

Also, systems that use RF energy as the probe will need realistic simulants for testing when the use of explosives is impractical. This measurement lab will facilitate simulant development by performing the same characterizations of simulant compositions as on explosives. This work will also support bottle screening research, and radar systems for detection of personnel borne improvised explosives, which is currently being performed at the TSL.

C. Requirements

1. Project plan

1.1 There are multiple technical areas (TAs) which are focus of the EMXLAB: 1) Terahertz reflection and attenuation spectroscopy, 2) dielectric constant measurements, 3) Terahertz imaging, 4) radar measurements, and 5) laser spectroscopy. The contractor shall develop a plan, which incorporates these areas into a coherent and complete plan for the EMXLAB project.

2. Literature Survey

2.1 The contractor shall review current status of the TA's and perform a literature survey. The contractor shall identify and obtain seminal works specific to the TAs.

3. Laboratory Infrastructure Requirements

3.1 The contractor shall advise the TSL on EMXLAB experimental facility requirements, including: floor space, plumbing, heating/cooling, furniture, computing, office, communications, safety, supplies, and budget.

3.2 The contractor shall obtain necessary temporary or permanent equipment enclosures or workspaces which are required for safety or environmental purposes.

4. Equipment and Supplies Acquisition

4.1 The contractor shall purchase commercially available experimental apparatus and obtain necessary supplies, in accordance with TSA guidance. Experimental apparatus shall be delivered to the EMXLAB in coordination with the TSL inventory control personnel.

- 4.2 The contractor shall install the equipment in a location to be designated by the TSA..
- 4.3 For all experimental apparatus or hardware to be developed the contractor shall provide justification for not using commercially available equipment.
5. Laboratory Operations
- 5.1 The contractor shall manage the operations of the EMXLAB with the oversight of the Head of the Personnel Imaging Branch or designee.
- 5.2 The contractor shall maintain a neat, safe and orderly laboratory consistent with standard prudent laboratory practices.
- 5.3 The contractor shall assist the TSL in procuring materials, supplies, equipment, software and services for the EMXLAB of a general nature. This will include helping to prepare specifications, lists of qualified equipment vendors and purchase orders.
- 5.4 The contractor shall implement all quality control and safety processes with the approval of the TSL. The contractor shall work in a safe manner with hazardous materials including but not limited to energetic materials, acids, bases and peroxides. The contractor shall maintain credentials for handling explosives.
- 5.5 The contractor shall execute experimental studies in accordance with TSL-approved plans and SOPs.
- 5.6 The contractor shall develop or utilize COTS automated methods and software in performing test and evaluation, recording and analyzing data, or other methods to improve efficiency and quality.
- 5.7 Master laboratory notebook. The contractor shall generate a master laboratory notebook(s) that includes a record of all daily activities, meetings, contacts, project progress, machine maintenance, equipment failures, problems, and any other pertinent laboratory information. This notebook must be kept in the lab at all times and remains property of the TSL. An electronic log may be kept in lieu of a physical log, on a common TSL server location, but must be regularly backed up onto another media source in case of server failure.5.7 The contractor shall maintain a Material Safety Data Sheet (MSDS) book that is current with all chemicals, test items and all other required materials that are located in the EMXLAB.
- 5.8 EMXLAB staffing. Once operational, the contractor shall ensure that the laboratory is staffed and able to respond to technical inquiries and perform scientific experiments and analysis a minimum of 32 hours per week during regular working hours (regular hours are considered 9 am to 5 pm weekdays), and also during the same time span to conduct tours of the EMXLAB on an as-needed basis. Contract personnel will not report to the TSL at any times the TSL is not operating.
- 5.9 Maintenance.

- 5.9.1 The contractor shall operate, collect data with, calibrate and perform routine manufacturer-recommended maintenance on laboratory equipment.
- 5.9.2 The contractor shall assist in arranging for repairs and other service necessary to keep laboratory equipment in good working order. The contractor will not be responsible for maintenance contracts, but will be required to notify the COTR 60 days before any machine service contract expires.
- 5.9.3 The contractor shall assist the TSL in procuring all maintenance agreements.
- 5.9.4 The contractor shall recommend upgrades to all equipment and shall assist the government in obtaining upgrades.
- 5.10 Sample preparation, storage, and disposal.
 - 5.10.1 The contractor shall prepare material samples to obtain optimal data on laboratory devices. These materials include but are not limited to solid minerals, metals, plastics, rubbers, putties, gels, liquids, slurries, emulsions and powders. Samples will include perishable and nonperishable items.
 - 5.10.2 The contractor shall maintain a sample/test article program that will track, store and control sample materials. The contractor shall ensure that all samples are maintained at optimum temperature and humidity to maximize sample lifetime, and shall dispose of samples appropriately.
- 5.11 Development of Procedures
 - 5.11.1 The contractor shall develop standard operating procedures (SOPs) for all significant processes required to perform the experimental studies, including, but not limited to: sample preparation, laboratory safety, disposal of hazardous materials, operation of equipment, recording data, data reduction and analysis, data storage, and reporting.
 - 5.11.2 Laboratory procedures shall be developed to be compliant with ISO 9001:2000 standards. These procedures shall comply with applicable standards, including, but not limited to ASTM, NIST, manufacturer-recommended, and TSL safety procedures.
 - 5.11.3 The contractor shall provide training to TSL in the standard operating procedures and other relevant topics involved in experimental studies.
 - 5.11.4 SOPs shall be documented electronically and a hardcopy set of procedures shall be readily available in the laboratory at all times. Procedures applicable to specific work and/or equipment shall be kept in close proximity to where the work will be accomplished. 5.1. The contractor shall develop a detailed schedule for specific experiments and maintain the schedule as experiments proceed.

6. Reporting

6.1 Laboratory notebooks. The contractor shall maintain a laboratory notebook for each technical area of the EMXLAB, which will be continuously available for inspection by the TSL.

6.2 Weekly activity reports. The contractor shall provide informal electronic activity reports of the work done on a weekly basis. This report should cover:

- Progress made on current tasks
- Problems encountered on current tasks
- Notification of possible future problems
- Attached filled out forms of all upcoming equipment / material purchases
- In total this report will not exceed 5 pages of double spaced text.

6.2 Quick-look reports. The contractor shall prepare and deliver a quick-look reports on a weekly basis containing summary (preliminary) findings of experimental studies.

6.3 Monthly progress reports. The contractor shall provide detailed monthly technical progress reports containing the status of all tasks. This report shall include, but not be limited to, the following areas:

Status of all on-going experimental studies including findings, problems encountered, problem resolution, risk analysis, schedule updates, and experimental data;

Status of Lab Operations including: Lab equipment operability, maintenance, problems, calibration, Record of tours or demonstrations, Meetings attended, Sample/Test article inventory, Reporting/Documentation, Materials/supplies Inventory.

6.4 Formal technical reports. The contractor shall provide formal technical reports from experimental studies every six months (or other acceptable schedule).

6.5 Data. The contractor shall provide all data, photographs, spreadsheets, databases, and other data acquired during experimental studies. The contractor shall maintain a database in the EMXLAB of all data acquired and shall maintain hard-copies of all technical reports. The contractor shall prepare data for publication in conference proceedings, journals, or other venue upon request.

D. Deliverables

The contractor shall provide deliverables according to the following schedule and format requirements. All deliverables shall be delivered in hardcopy and electronic form, unless otherwise noted.

#	Deliverable	Schedule	Format
1	Project plan	IAW contract SOW	TSL formal
2	Literature survey	30 days ARO	contractor
3	EMXLAB facility requirements	15 days ARO	contractor
4	Experimental apparatus	TBD	N/A

5	Experiment schedule	Ongoing	Contractor
6	SOPs	N/A	Contractor
7	Training	As-needed	N/A
8	Laboratory notebooks	Ongoing	Contractor (hard-copy only)
9	Weekly activity report	Monday following each week	Email only
10	Quick-Look Reports	2 days after completion of data collection	TSL QLR
11	Monthly progress reports	IAW contract SOW	Contractor
12	Formal technical reports	Draft: 30 days after completion of activity Final: 15 days after TSA comments	TSA formal
13	Data	IAW project plan	N/A
14	Database	IAW project plan	Contractor (electronic only)

DELIVERABLES

The Contractor shall provide all deliverables as identified in the original contract. The Contractor shall provide the personnel, facilities, equipment, and any other material and/or services necessary to execute the contract as identified in the original contract.

III. Other Contract Details

1. Period of Performance.

The period of performance for this SOW is 12 months from contract award. DHS may give subsequent extension notices to the Contractor in writing for further performance in accordance with the terms of this SOW.

2. Travel.

Temporary travel duty shall be required as necessary. The Contractor shall travel as necessary and tasked to support the contract. The Contractor shall provide on-site personnel as needed at work locations. Work locations may vary across the United States and international sites. Travel shall be approved by the COTR.

Travel is estimated for each quarter for 2 contractors making a trip to the west coast and gulf coast and staying for 3 to 5 days for research, development and testing in support of the EMXLAB.

3. DHS-Furnished Information.

- a. DHS will provide certain DHS information, materials, and forms unique to DHS to the Contractor to support certain tasks under this SOW.
- b. The DHS S&T Technical Representative identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
- c. The Contractor will prepare any documentation according to the guidelines provided by DHS.

4. DHS-Furnished Facilities, Supplies, and Services.

Work at DHS-provided facilities is necessary for the services being performed under this SOW, and such facilities will be provided at the Transportation Security Laboratory in Atlantic City International Airport, NJ.

5. Place of Performance.

The Contractor shall perform this work at the Transportation Security Laboratory within the EMXLAB.

6. Funding Requirements.

DHS will provide funding to the Contractor in accordance with DHS's appropriations and available funds.

IV. Points of Contact

The DHS POC are as follows:

Contracting Officer: Kevin Dillon, (b)(2) (b)(6)
COTR: Sharon Moore, (b)(2) (b)(6)
Technical Monitor: Barry T. Smith, Ph.D (b)(2) (b)(6)

DHS S&T may change the individual designated as a POC upon notice to the Contractor of such change.

Statement of Work for Explosives Effects Laboratory Operations Support

Directorate of Science and Technology US Department of Homeland Security Transportation Security Laboratory

RSLF-08-00084

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The S&T Transportation Security Laboratory (TSL), located at the William J. Hughes Technical Center, is the DHS center for explosives detection and mitigation research, engineering, development, test and evaluation.

The TSL has established an internal laboratory for conducting fundamental and applied research to characterize improvised explosives and explosive devices and their effects on personnel and structures. The research areas of this laboratory include, but are not limited to, (1) determination of the sensitivity and stability of improvised explosives due to impact, friction, electrostatic discharge and thermal changes, (2) conducting elemental composition, explosive potential, and/or detection probability of liquid and solid energetic materials, (3) modeling and simulation of explosive events using commercial finite element software, (4) determining material and structural response to shock loading, (5) Identify and develop explosive mitigation technologies, and (6) development of new instrumentation techniques.

II. Scope of Work

The TSL will assign specific explosive characterization tasks to the contractor as deemed necessary by the Technical Monitor. The majority of directed tasks will be considered level of effort. However, the TSL may request that a cost estimate, schedule and potential risks be provided by the contractor for certain tasks. At the time of such direction, the TSL Technical Monitor, in coordination with the COTR, will define any documentation, software, equipment or test fixtures that the contractor must deliver in order to satisfy the requirements of the task.

1 The contractor shall furnish one TSL on-site resource to act as the primary focal point for directed on-site activities.

2 The contractor shall provide information technology (IT) services to support the maintenance and upgrade of the Linux Cluster installed within TSL. The contractor shall conduct routine backups of data and install critical patches and revisions to resident software applications. As directed, the contractor will purchase additional software applications to supplement the modeling and simulation capability of the Linux Cluster. The contractor may also be directed to

purchase technical support packages for existing installed software applications (i.e., MSC software).

3 The contractor shall design, develop and manufacture custom test fixtures that will measure the effects of explosive phenomena. The contractor will continue to develop the image correlation test fixture and initiate the design of the split bar fixture. The contractor may be required to purchase friction, electrostatic discharge, and thermal sensitivity test fixtures.

4 The contractor shall provide test engineering support to assist with test planning, set up, test conduct and clean up; scientific equipment operation; data acquisition, compilation, reduction and analysis; and technical report writing. The contractor shall purchase supplies and equipment necessary for supporting all testing operations.

5 As emerging requirements are defined, the contractor shall provide appropriate technical support to satisfy explosive characterization and mitigation task needs.

II. Deliverables:

Deliverable dates shall be defined in the project plan. The contractor shall submit the following deliverables:

- Test and evaluation plans as required
- Test and evaluation database as required
- Test and evaluation report as required
- Project final report as required
- Test designs and assembled fixtures
- Monthly reports according to contract requirements
- Trip reports according to contract requirements.

III. Other Contract Details

Period of Performance. The period of performance is 12 months from task award with the option for 6 additional months.

Project Management

The contractor shall prepare a project plan that addresses the activities associated with this tasking. The project plan shall identify the Principal Investigator (PI) that will be assigned. It shall identify any subject matter experts familiar with the applicable technology that will work with this task. The project plan shall include a Work Breakdown Structure (WBS) in GANTT Chart form. The contractor shall revise the project plan schedule at least monthly throughout the project, as required. The TSL will provide comments on the plan and the contractor shall incorporate TSL comments and provide the final project plan within 7 calendar days after receipt of TSL comments.

Since project tasks will be assigned mostly on a level of effort basis, Earned Value Analysis (EVA) will not be required unless specified by technical monitor.

Materials/Equipment/Software/Services

1 The purchase of materials, equipment and software is anticipated throughout the performance of the task. Materials, equipment and software will be purchased as directed by the Technical Monitor or as required by defined tasking, with COTR approval.

2 All purchased materials not expended during the execution of the task will become the property of the TSL. All purchased equipment and software will become the property of the TSL.

3 The purchase of subject matter expert consultant and mechanical fabrication services may be required.

Travel.

Travel will be required under this task. Prior approval from the COTR is required. The contractor shall meet with the TSL Technical Representative and COTR for this project on an as-needed basis, including but not limited to a kick-off meeting, a scheduling meeting, meetings to conduct testing, and a final review.

Government Furnished Equipment and Information

Onsite office, laboratory space, telecommunications, and computers will be provided for one person within the TSL. Only DHS-approved computers will be permitted to connect to DHS networks. The contractor may cooperate with other laboratory staff as needed, and may utilize DHS-owned equipment as needed, subject to DHS approval.

Place of Performance. The contractor shall perform work under this SOW at the explosives effects lab established at the TSL.

Security Requirements.

- a. All work performed under this SOW is unclassified unless otherwise specified by DHS. All other security requirements are specified in the omnibus statement of work.
- b. If classified work is required under this SOW, DHS will provide specific guidance to the contractor as to which work will be conducted in a classified manner and at which classification level. The contractor shall adhere to other applicable government orders, guides, and directives pertaining to classified work. This SOW requires access to information up to the Secret level. The contractor shall comply with applicable DHS Security Classification Guides.

Points of Contact

DHS

Contracting Officer: Kevin Dillon, (b)(2) (b)(6)

COTR: Sharon Moore, (b)(2) (b)(6)

Technical Monitor: Chih-Tsai (Charles) Chen, (b)(2) (b)(6)

Statement of Work for Canine Training Aid Assessment

Directorate of Science and Technology U.S. Department of Homeland Security Transportation Security Laboratory

RSTL-08-00010

Task #

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Explosives Division supports this effort through the Explosives Canine Program.

To address DHS customer capability gaps, the Explosives Division plans to optimize canine explosive detection performance to enable DHS canine user agencies such as TSA, CBP, USSS and Infrastructure Protection (IP) to meet new threats and increased demand for canine inspections. This project, Canine Training Aid Assessment, will assess the effectiveness of non-hazardous canine training aids developed under the Explosives Canine Program to allow for the detection of new threats and optimize the canine explosive detection performance.

The Canine Training Aid Assessment will assess the effectiveness of non-hazardous canine training aids developed under other Explosives Canine Program efforts for use with canine training units. Phase I will focus on peroxide training aids. Subsequent phases may be awarded as new training aids are developed but are not part of this tasking.

II. Scope of Work

Vendor will perform the tasks described in this SOW:

Assess the effectiveness of canine training aids using operationally trained and deployed canine teams. The training aids will be furnished by the government after development under the Explosives Canine Program. A test team will travel to government specified locations to utilize canine teams, which are part of TSA's National Explosives Detection Canine Team Program (NEDCTP). The teams will be trained on the supplied training aids and then tested on detection of related explosives in various locations, forms and quantities. The assessment will consist of a pilot test (first location) then successive test locations.

Program Element / Project	Major Tasks	Key Milestones and Deliverables
<p>Canine Training Aid Assessment The goal of this program element is to assess the effectiveness of non-hazardous canine training aids developed under other Explosive Canine Program efforts using operationally trained and deployed canine teams.</p>		
<p>Phase I – The goal of Phase I is to assess the effectiveness of non-hazardous peroxide training aids</p>	<p>Phase I – (this task)</p> <ul style="list-style-type: none"> • Identify locations and canine test teams • Establish Test schedule and coordinate delivery of explosive training aids • Conduct Pilot test at first airport/transit site • Update Test Plan • Conduct tests at the remaining sites 	<ul style="list-style-type: none"> • 14 calendar days after task award • Kick off Meeting – within 30 calendar days of task award • Project Plan –14 calendar days from Kick off • Test Plan – 30 calendar days from Kick off • Pilot Test – 60 calendar days from approved test plan • Interim Reports – 7 calendar days after each test • Final Report – 45 calendar days after completion of final test

<p>Phase II/III – The goals of Phases II and III are to assess the effectiveness of non-hazardous training aids developed under other Explosives Canine Program efforts. These awards will be requested after completion of the development of the training aids and are anticipated in FY10 and FY11, respectively. Canine training aids currently under development include aids for home made explosives, and aids taking aging effects into account.</p>	<p>Phase II /III – (as part of potential option as a future award)</p> <ul style="list-style-type: none"> • Identify locations and canine test teams • Establish Test schedule and coordinate delivery of explosive training aids • Conduct Pilot test at first airport/transit site • Update Test Plan • Conduct tests at the remaining sites 	<ul style="list-style-type: none"> • 14 calendar days after task award • Kick off Meeting – within 30 calendar days of task award • Project Plan –14 calendar days from Kick off • Test Plan – 30 calendar days from Kick off • Pilot Test – 60 calendar days from approved test plan • Interim Reports – 7 calendar days after each test • Final Report – 45 calendar days after completion of final test
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III. Other Contract Details

1. **Period of Performance.** The period of performance for this SOW is 12 months from the contract award date with the option to extend for 6 months
2. **Travel.** Travel must be preapproved by the &T COTR, and the contractor will provide trip reports to the COTR . Local travel will not be reimbursed. Other travel will be reimbursed in accordance with the *Federal Travel Regulation*.
3. **DHS-Furnished Information.**
 - a. DHS will provide information, materials, and forms unique to DHS to the contractor to support tasks under this SOW. Such DHS-provided information, materials, and forms shall remain the property of DHS, unless otherwise indicated in writing by DHS, and may not be distributed beyond the contractor’s project performers without DHS's prior written permission.
 - b. The DHS Technical Representative identified in this SOW will be the point of contact (POC) for identifying required information to be supplied by DHS.
 - c. DHS will provide guidelines to the contractor to use in preparing any documentation (e.g., report deliverables or monthly status reports).

4. **DHS-Furnished Facilities, Supplies, and Services.** Work at DHS-provided facilities is not required for this effort.
5. **Place of Performance.** The contractor will perform the work under this SOW at its location and the assessments will take place at government specified locations in order to utilize canine teams which are part of TSA's NEDCTP.
6. **DHS-Furnished Property.** A list of potential DHS property will be provided to Vendor at the kick off meeting. If DHS property is provided, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$5,000 that is required to support technical tasks performed pursuant to this SOW, Vendor shall obtain the DHS COTR prior written consent. If the DHS COTR consents to such purchase, such item shall become the property of DHS. Vendor will maintain any such items according to currently existing property accountability procedures. The DHS COTR will determine the final disposition of any such items.

7. **Deliverables.** Vendor will provide all deliverables identified in this SOW directly to the DHS COTR with a copy of the transmittal letter to the Contracting Officer.
8. **Program Status Report.** Vendor will deliver a monthly program status report to the DHS COTR according to the omnibus contract statement of work.
9. **Funding Requirements:** DHS will provide funding to the Contractor in accordance with DHS's appropriations and available funds.
10. **Security Requirements.**

Security requirements for this task are consistent with those outlined in the omnibus statement of work. Work performed under this SOW is classified as sensitive security information (SSI) unless otherwise specified by DHS. DHS S&T will provide specific guidance on appropriate handling and storage of SSI.

IV. Points of Contact

The DHS POCs are as follows:

Contracting Officer: Kevin Dillon, (b)(2) (b)(6)

COTR: Sharon Moore, (b)(2) (b)(6)

Technical Monitor: Polly Gongwer, Ph.D (b)(2) (b)(6)

**Statement of Work
For
R&D Technology Readiness Evaluation for Air Cargo Systems
RSTL-08-00023**

**Directorate of Science and Technology
U.S. Department of Homeland Security
Air Cargo Program**

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Air Cargo Program supports this effort through various activities such as conducting applied research to bring prototype equipment to fruition, conducting laboratory and field assessments to determine system effectiveness and efficiency in detecting explosives, and conducting human factors assessments to ensure system usability.

Congress has mandated that 50% of all cargo placed on commercial passenger aircraft be screened by February 2009 and that 100% of cargo be screened by August 2010. To meet this aggressive schedule, the TSA is requesting DHS/S&T support in testing Commercial-Off-The-Shelf (COTS) and near-COTS equipment for screening break-bulk, palletized, and containerized cargo. This project supports that request.

II. Scope of Work

The scope of work includes the planning and test preparation for three R&D Test Readiness Evaluations (TREs) for break-bulk and palletized/containerized cargo screening equipment. Specific tasks are listed below. The personnel that Vendor provides shall have the skills and technical background necessary to successfully complete the tasks described in this SOW.

1. Programmatic.

Vendor shall:

- a. Provide an Integrated Master Schedule that integrates all associated tasks and deliverables within this SOW and the coordination and delivery of government furnished items.

- b. Generate a Monthly Status Report (MSR) that reports the project status during the reporting period. At a minimum, the MSR shall include schedule, cost and technical progress; identify any schedule, cost or technical risks; and list proposed mitigation efforts for the risks identified.
- c. Conduct Program Management Reviews (PMR), as required, that report the current project status. At a minimum, the PMR shall include schedule, cost and technical progress; any identified schedule, cost and technical risks; and proposed mitigations to the identified risks.

2. Planning.

Vendor shall:

- a. Develop an R&D Test and Evaluation (T&E) plan for the evaluation of break-bulk and palletized/containerized air cargo screening systems. Phase I of the R&D T&E plan shall address all activities associated with the break-bulk air cargo systems. Phase II shall address all activities associated with the palletized/containerized screening systems. At a minimum, the R&D T&E plan shall contain the test methods, equipment descriptions, Measures Of Performance (MOPs), Measures Of Suitability (MOSs), and the data reduction and analysis strategy.
- b. In coordination with the technical monitor, develop the test run order, scoring plan, and commodity set lists along with the data reduction and analysis strategy.
- c. In coordination with technical monitor, design and construct the threat item test articles.
- d. Modify the existing MS Access-based X-Ray/AT Database to provide for sufficient capacity to store all pertinent data and image scoring results.

3. Preparation.

Vendor shall:

- a. Inventory all existing government-owned commodities (i.e. commodities from previous TSL trace studies, containerized BAA, Optimized EDS, etc.), and procure and repackage (if necessary) the non-perishable commodities sets as identified in the approved R&D T&E plan.
- b. Arrange for the purchase and delivery of perishable commodities in standard shipping configurations or cargo commodity simulants test articles as identified in the approved R&D T&E plan.

- c. In coordination with the technical monitor, purchase the explosives materials needed to construct the threat articles to be inserted into the commodities as per the approved R&D T&E plan.

4. Deliverables.

Item	Due
Integrated Master Schedule	14 calendar days after award
Monthly Status Report	As required in omnibus statement of work
Program Management Reviews	As required
Draft R&D TRE T&E Plan	30 calendar days after task award
Test Run Order	30 calendar days after task award
Scoring Plan	30 calendar days after task award
Commodity Set List	30 calendar days after task award
Threat Articles Design	30 calendar days after task award
Final R&D TRE T&E Plan	14 calendar days after receipt of comments
Database System Software	As per approved schedule
Durable Commodities	As per approved schedule
Perishable Commodities/Simulants Test Articles	As per approved schedule
Threat Articles Delivery	As per approved schedule

III. Other Contract Details

1. **Period of Performance.** The period of performance for this SOW is 12 months from the contract award. DHS may give subsequent extension notices to Vendor in writing for further performance in accordance with the terms of this SOW.
2. **Travel.**
 - a. The DHS ORD Director and the DHS S&T Special Assistant for International Policy must approve all foreign travel in advance.
 - b. Travel will include the U.S. Army Aberdeen Test Center, Aberdeen Proving Grounds, MD, to support certain tasks under this SOW.
 - c. Vendor shall obtain the written consent of the DHS COTR identified in this SOW prior to performing any travel.
3. **DHS-Furnished Information.**

- a. DHS will provide certain DHS information, materials, and forms unique to DHS to Vendor to support certain tasks under this SOW.
 - b. The DHS Technical monitor identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
 - c. Vendor shall prepare all documentation, including the Test Run Order, Scoring Plan, etc., according to the guidelines provided by DHS. Exemplar documents will be provided to the vendor upon request.
4. **DHS-Furnished Facilities, Supplies, and Services.** DHS will not provide facilities, supplies, or services for work to be completed under this SOW.
 5. **Place of Performance.** Vendor shall perform all work under this SOW at a location other than TSL.
 6. **DHS-Furnished Property.**
 - a. The MS Access-based X-Ray/AT Database furnished as per Par II.2.d under the SOW will be provided free of cost to Vendor.
 - b. Any government-owned cargo commodities identified as per II. Par. 3.a and any government-owned explosives materials furnished as per Par. II. 3.c under the SOW will be provided free of cost to Vendor. DHS will maintain property records of any items or materials provided to Vendor.
 - c. Before purchasing any individual item equal to or exceeding \$5,000 that is required to support technical tasks performed pursuant to this SOW, Vendor shall obtain the DHS DHS COTR written consent. The DHS COTR may lower or raise the aforementioned \$50,000 threshold at his/her discretion and on written notice to Vendor. If the DHS COTR consents to such purchase, such item shall become the property of DHS. Vendor shall maintain any such items according to currently existing property accountability procedures. The DHS COTR will determine the final disposition of any such items.
 7. **Deliverables.** Vendor shall provide all deliverables identified in this SOW directly to the DHS COTR with a copy of the transmittal letter to the Contracting Officer.
 8. **Program Status Report.** Vendor shall deliver the MSR to the DHS COTR according to the omnibus statement of work.
 9. **Security Requirements.**
 - a. All work performed under this SOW shall be considered Sensitive Security Information unless otherwise specified by DHS. Security requirements are outlined in the omnibus statement of work.

IV. Points of Contact

The DHS POCs are as follows:

DHS Contacting Officer: Kevin Dillon, (b)(2) (b)(6)

DHS Contracting Officer: Sharon Moore, (b)(2) (b)(6)

DHS Technical Monitor: Steven Curran, (b)(2) (b)(6)

DHS Transportation Security Laboratory
William J Hughes Technical Center
Building 315
Atlantic City International Airport, NJ 08405

DHS may change the individual designated as a POC upon notice to Vendor of such change.

Bulk Detection Enhancement Bulk Explosives Detection Research Support Statement of Work

**Directorate of Science and Technology
U.S. Department of Homeland Security
Transportation Security Laboratory**

RSTL-08-00034

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland.

The Bulk Explosives Detection Research Program supports this effort through the evaluation and study of explosives detection imaging systems and automated detection algorithms. The requirement for this project, Bulk Explosives Detection Research Support, is to provide scientific and engineering support to the bulk program in performing various studies in image quality, image processing, shielding, and detection algorithm response to a variety of presentations of threat and nonthreat objects. Using the results from these studies, the government will be in a much better position to 1) establish the baseline performance for current explosives detection technologies, 2) recommend/require improvements to currently deployed detection systems, and 3) project the requirements for future systems.

II. Scope of Work

The contractor shall perform the tasks described in this SOW:

A. General Scope

The scope of this statement of work includes the following activities:

- Laboratory device operations, data collection and experimentation
- Scientific and engineering studies and support
- Development of procedures
- Development of test articles
- Documentation and publication of procedures, methods, data and findings
- Cooperation with US national laboratories and industrial partners.

B. Tasks

1. X-ray and Computed Tomography (CT)-Based Imaging and Explosives Detection Studies.

The contractor shall perform various studies, as directed by the government, on basic imaging and detection performance of automated explosives detection systems. The contractor shall work together with the government in formulating the strategy of studies to be performed, and shall work together with the government on an ongoing basis to support the research program. Government staff may or may not be participants in these studies, including data collection, data analysis, test article design, etc. The goals of the work include measuring the X-ray profiles of test objects to explore partial volume effects, beam hardening effects, shielding effects, false alarm materials, explosive materials, clutter effects, etc. The outcome of the work will be used to assist the government in improving currently deployed Explosive Detection Systems (EDS) and in developing requirements for next-generation EDS (Manhattan2).

Data collection will primarily take place at the Transportation Security Laboratory (TSL), but may also be conducted elsewhere, such as Tyndall Air Force Base or Lawrence Livermore National Laboratory. The studies and experiments will involve acquiring data using TSL on-site and off-site equipment, recording and archiving raw and/or reconstructed image data, performing data processing and image reconstructions, and analyzing the images as needed to meet the objectives of the studies. Automation of the analysis process will be highly desirable to increase efficiency, depending on the amount of data to be analyzed.

The contractor shall design experiments, studies and tests in accordance with standard approaches to experimental design, particularly with respect to error analysis, although novel approaches are acceptable. The contractor shall prepare experimental plans and provide for TSL review prior to the start of experimental data collection.

2. Test article development and standardization

The contractor shall develop phantoms and other test articles as required. The contractor shall document the designs of test articles. Test articles shall be ruggedized to withstand multiple uses in EDS and possible transport to other locations. The contractor shall standardize the test articles when requested, to support the potential for other entities (such as equipment vendors) to fabricate and use the test articles for their own use. All test article designs shall be documented with appropriate engineering drawings, subject to approval of the government.

3. Electronic Data Storage

The contractor shall utilize Commercially off the Shelf (COTS) electronic data storage for data collected under this SOW. The contractor shall acquire the necessary storage for current and projected data storage needs.

4. General Tasking

The contractor shall ensure that all experimental and test apparatus are operated according to manufacturer or TSL standard operating procedures. The contractor shall utilize all calibration test articles as required. The contractor may develop additional calibration test articles and procedures to support the work under this SOW. The contractor shall notify the government as soon as possible after equipment malfunctions arise.

The contractor shall attend monthly review meetings to discuss the status of ongoing work, planned work, schedules, issues and other pertinent information. Meetings may take place at the TSL or other mutually agreeable locations.

The contractor shall adhere to applicable quality control and safety processes that are in place at the TSL. The contractor shall work in a safe manner with hazardous materials including energetic materials.

C. Deliverables

1. Standard Operating Procedures (SOPs).

As they are developed, the contractor shall deliver and maintain a record of all SOPs in both hard copy and electronic format.

2. Data Archives.

The contractor shall provide all data obtained and generated during the course of the work, including storage equipment. Data shall be stored electronically or manually as appropriate for the type of data.

3. Technical Reports.

The contractor shall deliver official S&T reports for each individual study. The format for each report will be agreed upon in advance. The contractor shall assist in the preparation of other reports, data or presentations on an as-needed basis.

4. Software.

The contractor shall deliver all software developed under this project upon completion of the work. The contractor shall provide the software during the course of the work upon request.

The tasks are summarized in the following table:

Program Element / Project	Major Tasks	Key Milestones and Deliverables
Checked Baggage/ Bulk Detection Enhancements/ Bulk Explosives Detection Research	X-ray and CT Imaging and Explosives Detection Studies	1) experimental plan, at least 2 weeks in advance of each experiment/data collection 2) At least one formal report per study (format TBD), within 30 calendar days of completion of study 3) SOPs, as they are developed (contractor format)
	Test article development and standardization	1) test articles, as needed, prior to each experiment/data collection 2) test article engineering drawings, within 5 calendar days of each study, as applicable 3) all test articles, upon completion of studies
	Electronic Data Storage	1) all electronic and manual data, and storage media, on an ongoing basis (weekly)
	Software	1) all software developed under this project

Personnel provided by the contractor shall have the skills and technical background necessary to successfully complete the tasks described in this SOW, including but not limited to the following:

- Operation of X-ray imaging and CT-based explosives detection systems
- Explosives handling
- Image processing
- Dual-energy X-ray
- CT reconstruction and quantitative CT analysis
- Mechanical engineering design and documentation
- Technical writing.

III. Other Contract Details

1. **Period of Performance.** The period of performance for this SOW is 12 months from the task award date. DHS may give subsequent extension notices to the contractor in writing for further performance in accordance with the terms of this SOW.
2. **Travel.** The COTR must approve all travel in advance. In addition, the DHS ORD Director and the DHS S&T Special Assistant for International Policy must approve all foreign travel 60 days in advance.
3. **DHS-Furnished Information.**
 - a. DHS will provide certain DHS information, materials, and forms unique to DHS to the contractor as requested, to support certain tasks under this SOW.
 - b. The DHS COTR identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
 - c. The contractor shall prepare any documentation according to the guidelines provided by DHS.
4. **DHS-Furnished Facilities, Supplies, and Services.** The government will provide access to the Transportation Security Laboratory facilities and equipment resident therein, according to the needs of the work in this SOW. However, the government is not anticipating to provide office space for any contractor employees.
5. **Place of Performance.** The contractor shall perform the work in this SOW at the TSL, contractor's facilities, or other designated facilities, as needed.
6. **DHS-Furnished Property.** It is not anticipated that the government will provide DHS property to the contractor.

Before purchasing any individual item equal to or exceeding \$5,000 that is required to support technical tasks performed pursuant to this SOW, the contractor shall obtain the DHS COTR prior written consent. The DHS COTR may lower or raise the aforementioned \$5000 threshold at his/her discretion and on written notice to the contractor. If the DHS consents to such purchase, such item shall become the property of DHS. The contractor shall maintain any such items according to currently existing property accountability procedures. The DHS COTR will determine the final disposition of any such items.

7. **Deliverables.** The contractor shall provide all deliverables identified in this SOW directly to the DHS COTR with a copy of the transmittal letter to the Contracting Officer.

8. Program Status Reporting.

Weekly Activity Report. The contractor shall provide informal (e-mail) concise activity reports of the work done on a weekly basis to the technical monitor. These are informal deliverables that do not require a formal review process.

Monthly Status Report. The contractor shall deliver a monthly program status report to the DHS COTR according to the requirements of the omnibus statement of work and will include the following metrics:

- Technical status of all on-going studies and tasks
- Description of Test articles
- Record of Technical Interchange Meetings (TIMs) attended
- Reporting /Documentation reviewed or delivered
- Problems and resolution
- Financial status, including budget, expenditures in the reporting period, total expenditures, earned value analysis.

9. **Funding Requirements:** DHS will provide funding to the Contractor in accordance with DHS's appropriations and available funds.

10. Security Requirements.

- a. All work performed under this SOW is classified as sensitive security information unless otherwise specified by DHS. All security requirements are referenced in the omnibus statement of work.

11. Intellectual Property Rights

The government shall retain full rights to intellectual property and software developed under this project.

IV. Points of Contact

Contracting Officer: Kevin Dillon, (b)(2) (b)(6)

COTR: Sharon Moore, (b)(2) (b)(6)

Technical Monitor: Ronald Krauss, Ph.D, (b)(2) (b)(6)

Department of Homeland Security, Science & Technology
Transportation Security Laboratory
William J Hughes Technical Center, Building 315-200
Atlantic City, NJ 08405

Statement of Work For Cargo Screener Training and Selection Tests

U.S. Department of Homeland Security Science and Technology Directorate Transportation Security Laboratory

RSTL-08-00043
Task #

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Science and Technology Directorate (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Human Factors Program supports this effort by investigating the issues that arise when automation and human decision making are interfaced.

The organization and scope of cargo screening for explosive threats in the U.S. is undergoing great changes as TSA and other government and private entities move towards full compliance with HR 1, the law which mandates 100% screening of cargo on passenger airlines by 2010. It is expected that the bulk of responsibility for actual screening will fall on airlines, indirect air carriers, and other private entities in the cargo chain of custody. The government's role in this framework is essentially regulatory (i.e., compliance and enforcement). One of the key areas of regulation is the qualification of screening personnel, the procedures that they must follow in performing their duties, the types and amounts of training they must receive, and the knowledge, skills, and capabilities they must initially and continuously demonstrate in order to properly perform their duties.

II. Scope of Work

In order to properly perform its regulatory role of compliance and enforcement, TSL needs certain tools that will facilitate establishing and monitoring the performance of screeners within the privatized air cargo environment. TSL also needs to establish standards by which all screeners must be trained, tested, and performance monitored. These tools will facilitate the selection of individuals who have the required abilities to screen cargo and will provide the necessary training to ensure screeners have the required knowledge and skills to meet the TSL's standards.

The Contractor will perform the following tasks and create the following products in support of these efforts:

- 1) Develop image interpretation training that provides for effective and efficient screening of cargo with X-ray and AT equipment. There will be separate modules for X-ray image interpretation and AT image interpretation. The training will consist of PowerPoint lessons, instructors and student training manuals, and computer based image interpretation training. The whole package should support a full day of training (8 hours). The format and packaging of training should be consistent with current standards of TSA's Office of Technology and Training.
- 2) Develop selection instruments for the most complex image based screening tasks. These instruments are image based tests that can be given to individuals with no training which predict future performance on the job. TSA has successfully used instruments of this type to shape their X-ray screening force, but Cargo presents additional challenges;
- 3) Develop qualification tests (i.e., proficiency tests) that can efficiently determine whether a screener demonstrates minimum standards of performance with screening equipment; these tests will be computer based image tests that can run on an AT or X-ray simulator. The test characteristics and the simulator characteristics will be consistent with TSA OTT's standards for these types of tests.
- 4) Develop a training package that can be used to provide instructor training to those responsible for training the screener workforce including a syllabus, training modules, and training images of threats, false alarms, and innocent stream-of-commerce objects; It is expected that the train the trainer module will take 2 days to complete, and will be in a format compatible with TSA's OTT train the trainer standards.
- 5) Validate all elements of the program through field and laboratory testing.

III. Other Contract Details

1. **Period of Performance.** The period of performance for this SOW is for one year starting from the day of contract award with the option to extend an additional 6 months.
2. **Travel.** Travel will be required in performance of these duties. Travel will include, but not be limited to, 4 individuals traveling to 3 cargo screening facilities for a week at a time. These will be one-time trips to each of the 3 sites. DHS will determine the actual training sites and schedule.

Travel will be reimbursed in accordance with the Federal Travel Regulations. Travel must be pre-approved by the S&T COTR, and the trip reports shall be provided to the S&T Technical Representative.

3. **DHS-Furnished Information.**
 - a. DHS will provide information (e.g., screening procedures), materials, and forms unique to DHS to support tasks under this SOW. Such DHS-provided information, materials, and forms shall remain the property of DHS, unless otherwise indicated in writing by DHS, and may not be distributed beyond project performers without DHS's prior written

Acceptance Criteria. Deliverables shall be subject to testing, review, and acceptance by DHS to verify that each deliverable satisfies DHS's applicable acceptance criteria. The term "Acceptance Criteria" means the criteria developed by DHS to determine whether a deliverable is ready for acceptance by DHS and may include, without limitation, requirements that the applicable deliverable: (i) has been completed and delivered/achieved according to this SOW; (ii) meets or exceeds the identified requirements in this SOW, including but not limited to technical specifications and performance standards; and (iii) complies with such other criteria as may be developed and agreed on by DHS and the contractor. Deliverables for which DHS wishes to develop Acceptance Criteria will be identified by DHS, in writing, prior to initiation of any work on such deliverables. DHS and contractor will agree in writing on the Acceptance Criteria associated with such deliverables.

Correction of Nonconformities. If a deliverable fails to meet the relevant Acceptance Criteria (each such failure or deficiency is referred to as "Nonconformity"), DHS will provide written notification to the Contractor of such nonconformities. The corrected Nonconformity will be redelivered to DHS, which will then confirm in writing whether the redelivered deliverable conforms to and satisfies the applicable Acceptance Criteria. The process described in this section may be repeated as necessary until all Nonconformities are corrected and the deliverable conforms to and satisfies its Acceptance Criteria or until either party reasonably determines that continued efforts would be unsuccessful. DHS will cover all expenses associated with these corrective activities.

7. **Publications and Communications Concerning Work Performed Under this SOW.** All public communications referencing the work performed under this SOW shall be coordinated between the Contractor and the S&T Technical Representative. The contractor shall route technical communication products such as reports, journal articles, presentations, briefings, white papers, and public communication products through S&T for internal review and approval. The contractor shall provide this information 30 days before it would like to release the document to an external audience.
8. **Program Status Report.** The contractor shall deliver a monthly program status report by the 15th of each month according to the omnibus statement of work.
9. **Security Requirements.** Work under this SOW is classified as Sensitive Security Information. S&T will provide specific guidance via DD Form 254. The Contractor shall also adhere to the requirements in the *National Industrial Security Program Operations Manual* (NISPOM).
10. **Intellectual Property.** The Government shall own all intellectual property stemming from this SOW.

IV. Points of Contact

The DHS POCs are as follows:

- DHS Contracting Officer – (b)(2) (b)(6)
- S&T COTR – (b)(2) (b)(6)
- Technical Monitor POC – (b)(2) (b)(6)

S&T may change the individual designated as a POC upon notice to the Contractor of such change.

Statement of Work for Spatially Directed Alarms

**Directorate of Science and Technology
U.S. Department of Homeland Security
Transportation Security Laboratory
Checked Baggage Program
RSTL-08-00044
Task #**

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland. The Checked Baggage Program supports this effort by investigating new screening technologies and issues that arise when automation and human decision making are interfaced.

As part of the effort to improve our overall ability to prevent calamitous incidents with explosive threats, entities within DHS, particularly TSA, have looked to enhance explosive detection at aviation checkpoints, by fielding explosive detection automation. This research project will look at the costs and benefits of such automation on human-system performance to ensure that it is consistent with the aviation screening mission (i.e., a highly effective and efficient screening tool).

II. Scope of Work

Vendor shall perform the tasks described in this SOW.

- 1) The task shall be to design a laboratory study, collect data, analyze data, and report the results. The task objectives are to examine:
 - a) Whether screeners should be presented with the system alarms prior to making an initial decision, or should they make an independent analysis and screening decision using explosives detection system images before consulting spatially directed alarms?
 - b) Is there a minimal reliability threshold (i.e., a positive predictive value) beyond which alarms provide no benefit to overall performance of the system? More specifically, is there a point where Transportation Security Officers (TSOs)

completely disregard system alarm information, because the false alarm rate is too high?

The study will be designed as a performance comparison between two different Concepts of Operations (ConOps) for the presentation of Advanced Technology (AT) system alarms. The first ConOps will be to present TSOs with system alarms before they make a final decision about the bag (i.e., threat or no-threat). The second ConOps will be to have the TSO make an initial decision regarding the bag, then display the system's alarms (if any), and lastly come to a final determination.

In addition, reliability of alarms will be manipulated as a second condition. All conditions will consist of images of checkpoint items including some images that include explosive threats and other prohibited items. The central questions that the study will answer include:

1. What is the best ConOps for displaying automated alarms (i.e., initially on or initially off)?
2. Is the choice of ConOps affected by the positive predictive value of the alarm in the experimental context?

Deliverables

The Contractor shall deliver:

1. A project plan within 14 calendar days of task award,
2. A Test and Evaluation Plan within 30 calendar days of task award, subject to identification of test locations and materials provided by DHS.
3. A Quick-Look Report within 15 calendar days after completion of data collection,
4. A Test and Evaluation Report within 30 calendar days after completion of data collection, and
5. Monthly Status Reports.

III. Other Contract Details

1. **Period of Performance.** The period of performance for this SOW is nine months after contract award. DHS may give subsequent extension notices to the contractor in writing for further performance in accordance with the terms of this SOW.
2. **Travel.** Travel may be required for data collection if screeners cannot be obtained locally.
3. **DHS-Furnished Information.**
 - a. DHS will provide certain DHS information, materials, and forms unique to DHS to Vendor to support certain tasks under this SOW.

- b. The DHS S&T Technical Representative identified in this SOW will be the point of contact (POC) for identification of any required information to be supplied by DHS.
 - c. Vendor will prepare any documentation according to the guidelines provided by DHS.
4. **DHS-Furnished Property.** DHS will provide the use of X-ray AT equipment and AT simulators as needed to accomplish this task.

Before purchasing any individual item equal to or exceeding \$50,000 that is required to support technical tasks performed pursuant to this SOW, vendor shall obtain the DHS S&T Technical Representative's prior written consent. The DHS S&T Technical Representative may lower or raise the aforementioned \$50,000 threshold at his/her discretion and on written notice to vendor. If the DHS S&T Technical Representative consents to such purchase, such item shall become the property of DHS. Vendor will maintain any such items according to currently existing property accountability procedures. The DHS S&T Technical Representative will determine the final disposition of any such items.

5. **DHS-Furnished Facilities, Supplies, and Services.** All testing for this effort will be conducted at the TSL. The government will provide the contractor with a collection of test images and facilities for testing screeners.
6. **Place of Performance.** Vendor will perform the majority of the work under this SOW at their offices. As stated above, vendor will perform certain work (e.g., data collection) under this SOW at a facility designated by S&T.
7. **Deliverables.** The Contractor will provide all deliverables identified in this SOW directly to the DHS COTR , with a copy of the transmittal letter to the Contracting Officer.
8. **Program Status Report.** Vendor will deliver a monthly program status report to the DHS COTR according to the omnibus statement of work requirements.
9. **Security Requirements.**
- a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
 - b. If classified work is required under this SOW, DHS will provide specific guidance to vendor as to which work will be conducted in a classified manner and at which classification level. Vendor will also adhere to other applicable Government orders, guides, and directives pertaining to classified or confidential work. This SOW may require access to information at the Sensitive Security Information level.
 - c. The contractor is required to comply with security requirements described in the omnibus statement of work.

IV. Points of Contact

The DHS POCs are as follows:

Contracting Officer: Kevin Dillon, (b)(2) (b)(6)

COTR: Sharon Moore, (b)(2) (b)(6)

Technical Monitor: William Maguire, Ph.D (b)(2) (b)(6)

Statement of Work for Next Generation Passenger Checkpoint
U.S. Department of Homeland Security
Science and Technology Directorate
Transportation Security Laboratory

RSTL-08-00047

Task #

I. Background

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge technologies and scientific talent in its quest to make America safer. The DHS Directorate of Science and Technology (S&T), Explosives Division (EXD) is tasked with researching and organizing the scientific, engineering, and technological resources of the United States and leveraging these existing resources into technological tools to help protect the homeland.

S&T, EXD, through the Transportation Security Laboratory (TSL) located at the W. J. Hughes Technical Center, Atlantic City, NJ has a requirement for a Research and Development (R&D), Test and Evaluation (T&E) technical support contractor to perform, but not be limited to, the activities and tasks specified in this section. The Contractor shall have the capability to provide on-site support as required. The support services shall provide specific technical expertise to the TSL, in accordance with technical criteria and disciplines determined by the TSL.

II. Scope of Work

The Contractor shall perform the tasks described in this SOW. The scope shall include but not be limited to the list below.

- 1. Specific Requirements.** The Contractor shall provide the necessary engineering and technical support as required to test and evaluate equipment that is being delivered and used by the Government. To accomplish this, the Contractor shall provide personnel with the necessary expertise to perform R&D test and evaluation activities within the scope of this contract.
- 2. Research, Development, Test, and Evaluation (RDT&E) Oversight and Expert Evaluation.** The Contractor shall evaluate and witness vendor-proposed and vendor-conducted testing. The Contractor shall perform engineering work that includes: design phase, production baseline specifications development, development of test and evaluation plans, and technical reports. The Contractor shall generate technical reports on investigation of feasibility design and studies. The Contractor shall prepare efficient test plans and procedures to ensure fair, repeatable, and valid results. The Government will furnish test articles as noted in Section III.3 below.
- 3. Scientific & Engineering Technical Evaluation Support.** The Contractor is required to provide unique skills in support of evaluating new concepts, technologies, and proposals

to support Department of Homeland Security initiatives. The Contractor is required to participate in design reviews, technical discussions, engineering and briefing meetings related to the program. The Contractor is required to provide coordination and develop briefings and status reports including the preparation of briefing material, visibility charts, and other program planning materials.

The Contractor shall design, develop, fabricate or obtain test fixtures and test articles to support the test process as needed.

4. **Explosive Handling.** The Contractor personnel provided for onsite support shall all have been trained in the safe handling of explosives and firearms as required by the TSL, or be capable of passing a TSL conducted safety training course.

DELIVERABLES

Monthly Progress/Expenditure Report

The Contractor shall provide a monthly status report on each task by the 15th day of each month for the calendar month preceding. In the absence of any formal deliverable for reporting, the monthly status report shall include the following:

- a. A summary of the work accomplished in the preceding month.
- b. A summary of significant tasks during the next reporting period.
- c. A summary of funds spent to date and funds spent the preceding month. This summary shall include the labor category, total labor hours worked for each labor category, and loaded labor rate billed. It shall also include any material purchases, with the name of the material item acquired, model #/serial #, quantity purchased, total amount, and the name of the vendor from which the item was purchased

III. Other Contract Details

1. Period of Performance.

The period of performance for this SOW is 12 months from an anticipated contract start date of December 8, 2008, with two (2) twelve (12) month option periods. DHS may give subsequent extension notices to the Contractor in writing for further performance in accordance with the terms of this contract.

2. Travel.

Attendance at reviews and audits at the vendor's facilities may be required.

Temporary travel duty shall be required as necessary. The Contractor shall travel as necessary and tasked to support the contract. The Contractor shall provide on-site personnel as needed at work locations. Work locations may vary across the United States and international sites. Travel shall be approved by the COTR.

Travel is estimated for each quarter for 2 contractors making a trip to the west coast and gulf coast and staying for 3 to 5 days for testing and meetings.

3. DHS-Furnished Information.

DHS will provide certain DHS information, materials, and forms unique to DHS to the Contractor to support certain tasks under this SOW.

4. DHS-Furnished Facilities, Supplies, and Services.

Work at DHS-provided facilities is necessary for the services being performed under this SOW, such facilities will be provided at the Transportation Security Laboratory in Atlantic City International Airport, NJ.

5. Place of Performance.

The Contractor will perform the work under this SOW at the Transportation Security Laboratory or the Contractor's facility.

6. DHS-Furnished Property.

DHS property will not be provided to the Contractor unless otherwise agreed in a task order issued under this SOW. In such instances, DHS will maintain property records.

Before purchasing any individual item equal to or exceeding \$5,000 that is required to support technical tasks performed pursuant to this SOW, the Contractor shall obtain the DHS S&T Technical Representative's prior written consent. The DHS S&T Technical Representative may lower or raise the aforementioned \$5,000 threshold at his/her discretion and on written notice to the Contractor. If the DHS S&T Technical Representative consents to such purchase, such item shall become the property of DHS. The Contractor will maintain any such items according to currently existing property accountability procedures. The DHS S&T Technical Representative will determine the final disposition of any such items.

7. Funding Requirements.

DHS will provide funding to the Contractor in accordance with DHS's appropriations and available funds.

8. Security Requirements.

- a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
- b. The Contractor shall be required to have a facility security clearance at the secret level and all key personnel shall be required to have a current secret level security clearance.

- a. If classified work is required under this SOW, DHS will provide specific guidance to the Contractor as to which work will be conducted in a classified manner and at which classification level.

IV. Points of Contact

The DHS POC are as follows:

Contracting Officer: Kevin Dillon, (b)(2) (b)(6)

COTR: Sharon Moore, (b)(2) (b)(6)

Technical Monitor: Barry T. Smith, Ph.D (b)(2) (b)(6)

DHS S&T may change the individual designated as a POC upon notice to the Contractor of such change.