

**ORDER FOR SUPPLIES OR SERVICES**

1. CONTRACT/PURCH ORDER/ AGREEMENT NO. HC1047-07-D-0001		2. DELIVERY ORDER/ CALL NO. 0991		3. DATE OF ORDER/CALL (YYYYMMDD) 2015 Apr 16		4. REQ / PURCH REQUEST NO DOSMC50089		5. PRIORITY	
6. ISSUED BY DISA/PL63 P O BOX 549 FORT MEADE MD 20755-0549		CODE HC1047		7. ADMINISTERED BY (if other than 6)  <b>SEE ITEM 6</b>				8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER  (See Schedule if other)	
9. CONTRACTOR EXELIS INC NAME ANNE HASSELBRACK AND 12975 WORLDGATE DR STE 700 ADDRESS HERNDON VA 20170-8008		CODE SM715		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	
						12. DISCOUNT TERMS Net 30 Days		13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15	
14. SHIP TO 2104 TURBOT LANDING ANNAPOLIS MD 21402-5084		CODE H98294		15. PAYMENT WILL BE MADE BY DFAS-COJJAQ ATTN: CAPSW/WRP2 P.O. BOX 309016 COLUMBUS OH 43236-9016		CODE HQ0131		MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.	
16. TYPE OF ORDER	DELIVERY/ CALL	<input checked="" type="checkbox"/>	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.						
	PURCHASE	<input type="checkbox"/>	Reference your quote dated _____ Furnish the following on terms specified herein. REF: T 30316 17 24 2014						
<p><b>ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.</b></p>									
NAME OF CONTRACTOR			SIGNATURE			TYPED NAME AND TITLE			DATE SIGNED (YYYYMMDD)
<input type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:									
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE  See Schedule									
18. ITEM NO.	19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT	
	<b>SEE SCHEDULE</b>								
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.					24. UNITED STATES OF AMERICA		25. TOTAL		520,723.00
27a. QUANTITY IN COLUMN 20 HAS BEEN							26. DIFFERENCES		
<input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED									
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE				c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE			
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE					28. SHIP NO.		29. DO VOUCHER NO.		30. INITIALS
f. TELEPHONE NUMBER		g. E-MAIL ADDRESS			<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR
36. I certify this account is correct and proper for payment.					31. PAYMENT		34. CHECK NUMBER		
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER			<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		35. BILL OF LADING NO.		
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO.	
								42. S/R VOUCHER NO.	

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013	FFP Engineering FFP Engineering Electromagnetic Support FFP Electromagnetic Spectrum Engineering/E3 Analysis and support as specified in the Performance Work Statement (T3803). The contractor's proposal titled "Sprint Nextel on Fort McCoy, E3 Analysis Support" dated 24 November 2014 is incorporated by reference. FOB: Destination PURCHASE REQUEST NUMBER: DOSMC50089	1	Each	\$28,729.00	\$28,729.00
				NET AMT	\$28,729.00
	ACRN AA CIN: DOSMC500890013				\$28,729.00

Section C - Descriptions and Specifications

PWS

PERFORMANCE WORK STATEMENT (PWS)  
SPONSOR PROGRAM  
as of 12/Nov/2014

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3803
Task Order Number:	0991

Type of Task Order	<input type="checkbox"/> Cost Plus Incentive Fee <input checked="" type="checkbox"/> Firm Fixed Price	(Check one box) (Double click on a box to check it.)
Key Words	Sprint Nextel, Fort McCoy, E3 Analysis, RADHAZ, PCS, LTE, MSP	
SPONSOR		
Sprint Nextel 5600 N. River Rd., STE 200 Rosemont IL 60018		

1. Contracting Officer's Representative (COR).

a. Primary COR.

Name:	<i>BC</i>
Organization:	Joint Spectrum Center (JSC)/OS351
Department of Defense Activity Address Code (DODAAC):	H98294
Address:	2004 Turbot Landing Annapolis, MD 21012-5064
Phone Number:	<i>BC</i>
Fax Number:	(410) 293-9268
E-Mail Address:	<i>BC</i>

b. Alternate COR.

Name:	TBD
Organization:	JSC/OS351
DODAAC:	H98294
Address:	2004 Turbot Landing Annapolis, MD 21012-5064
Phone Number:	
Fax Number:	
E-Mail Address:	

2. Task Order (TO) Title. Sprint Nextel on Fort McCoy E3 Analysis Support

3. Background. The Telecommunications Act of 1996 directed the heads of all Federal Government departments and agencies to facilitate access by mobile service providers (MSPs) to Federal property for the purpose of siting equipment and mobile service antennas (MSAs). In response, the Department of Defense (DoD) Chief Information Officer (CIO) [formerly the Assistant Secretary of Defense for Command, Control, Communications, and

Intelligence (ASD (C3I)) issued a policy memorandum regarding placement of commercial antennas on DoD property.<sup>1</sup>

The DoD CIO policy memorandum requires that Commanders and/or Agency Directors coordinate requests for the placement of new telecommunications services on Federal property with the DoD Joint Spectrum Center (JSC), and that the JSC evaluate the proposed antenna siting/telecommunication service for potential electromagnetic interference to the existing or planned telecommunications operations of the affected government facility. The memorandum further states that the requestor will reimburse the JSC for the cost of the evaluation.

Sprint Nextel, hereafter referred to as the purchaser, has requested permission to install and operate a Personal Communications Service (PCS) system and two Long Term Evolution (LTE) systems on Fort McCoy, WI.

4. Objectives. The objectives of this effort are to:

- Determine the potential for electromagnetic interference (EMI) from the proposed system transmitters to existing and planned military, government, and commercial communications-electronics (C-E) systems.
- Determine the potential for electromagnetic radiation hazards (RADHAZ) from the proposed system transmitters to personnel, fuel, and ordnance with electrically initiated devices (EIDs).

5. Scope. This PWS addresses tasking to be performed by the Electromagnetic Spectrum Engineering Services (ESES) contractor in the area of:

Electromagnetic Environmental Effects (E3) and Spectrum Engineering – coordinating electromagnetic compatibility (EMC) standards; analyzing equipment and systems for potential E3 problems and recommending solutions; performing radio frequency (RF) measurements; developing and conducting E3 training; assisting the acquisition community by assessing E3; determining operational frequency bands; and providing assistance in acquiring host nation approval for equipment operation.

6. Performance Requirements. The contractor shall provide an electromagnetic environmental effects (E3) and RADHAZ analysis of the proposed installation. The results of the analysis will be documented in a memorandum followed by a Consulting Report (CR).

6.1 Task 1 – E3 Analysis.

Preliminary information from the sponsor will be used to conduct a search of military, government, and commercial frequency assignment databases to identify systems operating on government facilities in the vicinity of the site of interest. The electromagnetic environment (EME) will be compiled from the Frequency Resource Record System (FRRS), the Government Master File (GMF), and the Federal Communications Commission (FCC) frequency assignment databases at the JSC. For the analysis of linear EMI effects, the EME will include FRRS and GMF assignments for systems within 75 miles of the proposed site in co-channel or adjacent-channel frequency bands (within  $\pm 10$  MHz of the PCS and LTE base station transmit frequency bands) and assignments for systems within 30 miles, operating in second and third harmonically related frequency bands. FCC assignments for systems within 10 miles operating in co channel, adjacent-channel, or second and third harmonically related frequency bands, will also be identified. The 75 mile radius will be used to include C-E equipment at other DoD and government facilities that could possibly receive signals from the proposed commercial transmitters.

For the analysis of non-linear EMI effects (intermodulation), the cosite EME will include FRRS, GMF, and FCC frequency assignments between 300 MHz and 30 GHz for systems within a two mile radius of the proposed site. The two mile radius is a conservative boundary for the analysis of non-linear EMI effects.

A site survey will not be required. Coordination will be conducted with the purchaser, US Government Spectrum Management, and Base Safety personnel at the proposed site. Proposed system information will be verified with the

---

<sup>1</sup> Anthony M. Valletta, DoD CIO (formerly OASD (C3I)) Memorandum to Secretaries of the Military Departments, et al., Subject: *Placement of Commercial Telecommunications Services on Federal Property*, Washington, DC: DoD CIO (formerly ASD (C3I)), 15 December 1997.

sponsor. Environmental frequency assignment data will be reviewed and validated with the installation spectrum manager. Any data for frequency assignments not listed in the FRRS, GMF, or FCC databases will be used to augment the project EME.

The augmented frequency assignment data, along with the system characteristics of the introduced commercial telecommunications equipment, will be used to perform the EMI analysis. EMI analysis techniques will be used to determine the potential for inband, adjacent band, harmonically related, and intermodulation interference. These techniques are designed to eliminate from further consideration those systems for which interference is not predicted using conservative analysis parameters.

For systems not eliminated in the conservative analysis, the Electromagnetic Spectrum Engineering Services (ESES) Contractor will conduct additional, more-detailed, analyses using additional JSC environmental analysis techniques. These techniques predict the effective on-tune received power levels considering the effects of transmitter power levels, harmonic levels, additional filtering provided by duplexers, etc., in the transmit path, transmitter antenna gain (in the direction of the victim receiver), receiver antenna gain (in the direction of the interfering transmitter), and receiver signal-filtering loss (frequency-dependent rejection).

The interference thresholds used in the EMI analysis will be based on interference-to-noise ratios (I/N) required for compatible operation as dictated by the specific modulation types involved in the interference interactions.

Deliverables: Results Memorandum followed by a CR

#### 6.2 Task 2 – RADHAZ Analysis.

Upon verification of the characteristics data of the proposed commercial telecommunications system, an analysis will be performed using applicable DoD thresholds to determine distance separation requirements to avoid the potential for RADHAZ to personnel, fuel, and ordnance using EIDs.

Deliverables: To be delivered in the Task 1 Results Memorandum and CR

7. Performance Standards. Not Applicable.

8. Incentives. Not Applicable.

9. Place of Performance. The primary efforts associated with this TO PWS shall be performed at the government and the ESES Contractor facility. A site survey will not be performed as described in item 6.1.

Alternate Place of Performance - Contingency Only. As determined by the COR, contractor employees may be required to work at an alternate place of performance (e.g., home, the contractor's facility, or another approved activity within the local travel area) in cases of unforeseen conditions or contingencies (e.g., pandemic conditions, exercises, government closure due to inclement weather, etc.). Non-emergency/non-essential contractors should not report to a closed government facility. Contractor shall prepare all deliverables and other contract documentation utilizing contractor resources. To the extent possible, the contractor shall use best efforts to provide the same level of support as stated in the PWS. In the event the services are impacted, reduced, compromised, etc., the Contracting Officer or the contractor may request an equitable adjustment pursuant to the Changes clause of the contract.

10. Period of Performance. 240 calendar days after contract award.

11. Delivery Schedule.

Schedule of Deliverables	
Title	Schedule of Deliverables
Results Memorandum	10 Weeks after TO Award
Consulting Reports	4 weeks after the Results Memorandum is distributed

12. Security. Work performed under this TO will include the following classifications of work: UNCLASSIFIED, PROPRIETARY, FOR OFFICIAL USE ONLY, CONFIDENTIAL, and SECRET. A SECRET clearance will be required to perform daily duties. Periodic meetings will be held where individuals are often required to share data and gather information in a classified environment. Individuals must be able to obtain and maintain a SECRET Clearance.

13. Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI). Historical project files and reports will be provided. Site and system characteristics information for the installation proposed by the purchaser will be provided.

14. Other Pertinent Information or Special Considerations.

a. Identification of Possible Follow-on Work. Not applicable.

b. Identification of Potential Conflicts of Interest (COI). The ESES contractor shall identify any possible organizational conflict of interest (OCI) as defined in Subpart 9.5 of the Federal Acquisition Regulation. If there is an OCI, the ESES contractor must inform the COR and provide an OCI Mitigation Plan that identifies how the OCI is to be mitigated.

c. Identification of Non-Disclosure Requirements. Not applicable.

d. Packaging, Packing and Shipping Instructions. Not Applicable, provided in the base contract.

e. Inspection and Acceptance Criteria. Not Applicable, provided in the base contract.

f. Property Accountability. Not applicable.

15. Section 508 Accessibility Standards. Not applicable.

16. External Support. None.

17. Pricing Information. Information is obtained from Price List for MSP Support.

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0013	Destination	Government	Destination	Government

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0013	POP 30-APR-2015 TO 29-DEC-2015	N/A	DISA JOINT SPECTRUM CENTER : <i>BK</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>AK</i> FOB: Destination	H98294



Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50089  
AMOUNT: \$28,729.00  
CIN DOSMC500890013: \$28,729.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer

Name: *BL*  
Organization/Office Symbol: PL63  
Phone No.: *BL*  
E-Mail Address: *BL*

Contract Specialist

Name: *BL*  
Organization/Office Symbol: PL63  
Phone No.: *BL*  
E-Mail Address: *BL*

Customer/COR/TM Point of Contact

Name: *BL*  
Organization/Office Symbol: DSO/ISC/OS351  
Phone No.: *BL*  
E-Mail Address: *BL*

Contractor Point of Contact

Contractor Legal Business Name:  
DUNS: 0833655498  
CAGE CODE: 9M715  
Contractor POC: Anne Hasselbrack  
E-Mail Address: [anne.hasselbrack@exelisinc.com](mailto:anne.hasselbrack@exelisinc.com) Phone Number: 301-867-2985

**OR**

Contractor POC:

Name: Michael Hayes  
Email: [michael.hayes@exelisinc.com](mailto:michael.hayes@exelisinc.com)  
Phone: 301-867-2956

(End of clause)

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)

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

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

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

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

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

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

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

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

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

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

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

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

### **Combo**

(Contracting Officer: Insert applicable document type(s). Note: If a "Combo" document type is identified but not supportable by the Contractor's business systems, an "Invoice" (stand-alone) and "Receiving Report" (stand-alone) document type may be used instead.)

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

### **Destination**

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

#### **Routing Data Table\***

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

Pay Official DoDAAC	HQ0131
Issue By DoDAAC	HC1047
Admin DoDAAC	HC1047
Inspect By DoDAAC	H98294
Ship To Code	N/A
Ship From Code	N/A
Mark For Code	H98294
Service Approver (DoDAAC)	H98294
Service Acceptor (DoDAAC)	H98294
Accept at Other DoDAAC	N/A
LPO DoDAAC	N/A
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	N/A

---

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

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

B6

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

Name  
Email: B6  
Phone B6

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

(End of clause)

# ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 12

<b>1. CONTRACT/PURCH. ORDER/AGREEMENT NO.</b> HC1047-07-D-0001	<b>2. DELIVERY ORDER/ CALL NO.</b> 0992	<b>3. DATE OF ORDER/CALL.</b> (YYYYMMDD) 2015 Apr 16	<b>4. RBQ/ PURCH. REQUEST NO.</b> DOSMC50073	<b>5. PRIORITY</b>
---	--	--	---	--------------------

<b>6. ISSUED BY</b> DISA/PL63 P.O. BOX 549 FORT MEADE MD 20755-0549 CODE <b>HC1047</b>	<b>7. ADMINISTERED BY (if other than 6)</b> CODE <div style="text-align: center; font-size: 1.2em; font-weight: bold;">SEE ITEM 6</div>
--	--

<b>9. CONTRACTOR</b> EXELIS INC. NAME ANNE HASSELBRACK AND 12975 WORLDGATE DR STE 700 ADDRESS HERNDON VA 20170-8008 CODE <b>SM715</b>	<b>10. DELIVER TO FOB POINT BY (Date)</b> (YYYYMMDD) <b>SEE SCHEDULE</b>	<b>11. MARK IF BUSINESS IS</b> <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	<b>12. DISCOUNT TERMS</b> Net 30 Days
--	--	--	--

<b>14. SHIP TO</b> COMMUNICATIONS CENTER 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 CODE <b>H98294</b>	<b>15. PAYMENT WILL BE MADE BY</b> CODE <b>HQ0131</b> DFAS-CO/JAQ ATTN: CAPSW/ORP2 P.O. BOX 369016 COLUMBUS OH 43238-9016	<b>13. MAIL INVOICES TO THE ADDRESS IN BLOCK</b> See Item 15
---	---	---

MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.

<b>16. TYPE OF ORDER</b>	<b>DELIVERY/ CALL</b>	<input checked="" type="checkbox"/>	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract. Reference your quote dated _____ Furnish the following on terms specified herein. REF: 48 CFR (1.377) and 101.152015
--------------------------	-----------------------	-------------------------------------	--

ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.

NAME OF CONTRACTOR <input type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:	SIGNATURE	TYPED NAME AND TITLE	DATE SIGNED (YYYYMMDD)
--	-----------	----------------------	------------------------

**17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE**  
 See Schedule

18. ITEM NO.	19. SCHEDULE OF SUPPLIES/ SERVICES	20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT
SEE SCHEDULE					

* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.	24. UNITED STATES OF AMERICA <div style="text-align: center; font-size: 1.5em; font-weight: bold;">86</div>
--	--

**27a. QUANTITY IN COLUMN 20 HAS BEEN**  
 INSPECTED  RECEIVED  ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED

<b>b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE</b>	<b>c. DATE</b> (YYYYMMDD)	<b>d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE</b>
---	------------------------------	--

<b>e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE</b>	<b>28. SHIP NO.</b>	<b>29. DO VOUCHER NO.</b>	<b>30. INITIALS</b>
---	---------------------	---------------------------	---------------------

<b>f. TELEPHONE NUMBER</b>	<b>g. E-MAIL ADDRESS</b>	<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	<b>32. PAID BY</b>
----------------------------	--------------------------	--	--------------------

<b>36. I certify this account is correct and proper for payment.</b> a. DATE (YYYYMMDD) b. SIGNATURE AND TITLE OF CERTIFYING OFFICER		<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	<b>33. AMOUNT VERIFIED CORRECT FOR</b>  <b>34. CHECK NUMBER</b>  <b>35. BILL OF LADING NO.</b>
--	--	---	--

<b>37. RECEIVED AT</b>	<b>38. RECEIVED BY</b>	<b>39. DATE RECEIVED</b> (YYYYMMDD)	<b>40. TOTAL CONTAINERS</b>	<b>41. S/R ACCOUNT NO.</b>	<b>42. S/R VOUCHER NO.</b>
------------------------	------------------------	--	-----------------------------	----------------------------	----------------------------

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013	Verizon Wireless on Kiamichi Mountain FFP Engineering Electromagnetic Support FFP Electromagnetic Spectrum Engineering/E3 Analysis and support as specified in Performance Work Statement (T3779). The contractor's proposal titled "Verizon Wireless on Kiamichi Mountain E3 Analysis Support with Exelis Corp dated 15 October 2014 is incorporated by reference. FOB: Destination PURCHASE REQUEST NUMBER: DOSMC50073	1	Each	\$19,951.00	\$19,951.00
				NET AMT	\$19,951.00
	ACRN AA CIN: DOSMC500730013				\$19,951.00

Section C - Descriptions and Specifications

PWS

PERFORMANCE WORK STATEMENT (PWS)  
SPONSOR PROGRAM  
as of 18/Sep/2014

Contract Number:	IIC1047-07-D-0001
JSC Tracking Number:	T3779
Task Order Number:	0992

Type of Task Order	<input type="checkbox"/> Cost Plus Incentive Fee <input checked="" type="checkbox"/> Firm Fixed Price	(Check one box) (Double click on a box to check it.)
Key Words	Verizon Wireless, Kiamichi Mountain, E3 Analysis, RADHAZ, LTE, MW, MSP	
SPONSOR		
Verizon Wireless One Allied Drive Little Rock, AR 72202		

1. Contracting Officer's Representative (COR).

a. Primary COR.

Name:	<i>B6</i>
Organization:	Joint Spectrum Center (JSC)/OS351
Department of Defense Activity Address Code (DODAAC):	H98294
Address:	2004 Turbot Landing Annapolis, MD 21012-5064
Phone Number:	<i>B6</i>
Fax Number:	(410) 293-9268
E-Mail Address:	<i>B6</i>

b. Alternate COR.

Name:	TBD
Organization:	JSC/OS351
DODAAC:	H98294
Address:	2004 Turbot Landing Annapolis, MD 21012-5064
Phone Number:	
Fax Number:	(410) 293-9268
E-Mail Address:	

2. Task Order (TO) Title. Verizon Wireless on Kiamichi Mountain E3 Analysis Support

3. Background. The Telecommunications Act of 1996 directed the heads of all Federal Government departments and agencies to facilitate access by mobile service providers (MSPs) to Federal property for the purpose of siting equipment and mobile service antennas (MSAs). In response, the Department of Defense (DoD) Chief Information Officer (CIO) [formerly the Assistant Secretary of Defense for Command, Control, Communications, and

Intelligence (ASD C3I)] issued a policy memorandum regarding placement of commercial antennas on DoD property.<sup>1</sup>

The DoD CIO policy memorandum requires that Commanders and/or Agency Directors coordinate requests for the placement of new telecommunications services on Federal property with the DoD Joint Spectrum Center (JSC), and that the JSC evaluate the proposed antenna siting/telecommunication service for potential electromagnetic interference to the existing or planned telecommunications operations of the affected government facility. The memorandum further states that the requestor will reimburse the JSC for the cost of the evaluation.

Verizon Wireless, hereafter referred to as the purchaser, has requested permission to install and operate a Long Term Evolution (LTE) system and a Microwave (MW) system on Kiamichi Mountain, OK.

4. Objectives. The objectives of this effort are to:

- Determine the potential for electromagnetic interference (EMI) from the proposed system transmitters to existing and planned military, government, and commercial communications-electronics (C-E) systems.
- Determine the potential for electromagnetic radiation hazards (RADHAZ) from the proposed system transmitters to personnel, fuel, and ordnance with electrically initiated devices (EIDs).

5. Scope. This PWS addresses tasking to be performed by the Electromagnetic Spectrum Engineering Services (ESES) contractor in the area of:

Electromagnetic Environmental Effects (E3) and Spectrum Engineering – coordinating electromagnetic compatibility (EMC) standards; analyzing equipment and systems for potential E3 problems and recommending solutions; performing radio frequency (RF) measurements; developing and conducting E3 training; assisting the acquisition community by assessing E3; determining operational frequency bands; and providing assistance in acquiring host nation approval for equipment operation.

6. Performance Requirements. The contractor shall provide an electromagnetic environmental effects (E3) and RADHAZ analysis of the proposed installation. The results of the analysis will be documented in a memorandum followed by a Consulting Report (CR).

6.1 Task 1 – E3 Analysis.

Preliminary information from the sponsor will be used to conduct a search of military, government, and commercial frequency assignment databases to identify systems operating on government facilities in the vicinity of the site of interest. The electromagnetic environment (EME) will be compiled from the Frequency Resource Record System (FRRS), the Government Master File (GMF), and the Federal Communications Commission (FCC) frequency assignment databases at the JSC. For the analysis of linear EMI effects, the EME will include FRRS and GMF assignments for systems within 75 miles of the proposed site in co-channel or adjacent-channel frequency bands (within  $\pm 10$  MHz of the LTE base station transmit frequency band and within  $\pm 20$  MHz of the MW frequencies) and assignments for systems within 30 miles, operating in second and third harmonically related frequency bands. FCC assignments for systems within 10 miles operating in co channel, adjacent-channel, or second and third harmonically related frequency bands, will also be identified. The 75 mile radius will be used to include C-E equipment at other DoD and government facilities that could possibly receive signals from the proposed commercial transmitters.

For the analysis of non-linear EMI effects (intermodulation), the cosite EME will include FRRS, GMF, and FCC frequency assignments between 300 MHz and 30 GHz for systems within a two mile radius of the proposed site. The two mile radius is a conservative boundary for the analysis of non-linear EMI effects.

A site survey will not be required. Coordination will be conducted with the purchaser, US Government Spectrum Management, and Base Safety personnel at the proposed site. Proposed system information will be verified with the

---

<sup>1</sup> Anthony M. Valletta, DoD CIO (formerly OASD (C3I)) Memorandum to Secretaries of the Military Departments, et al., Subject: *Placement of Commercial Telecommunications Services on Federal Property*, Washington, DC: DoD CIO (formerly ASD (C3I)), 15 December 1997.



sponsor. Environmental frequency assignment data will be reviewed and validated with the installation spectrum manager. Any data for frequency assignments not listed in the FRRS, GMF, or FCC databases will be used to augment the project EME.

The augmented frequency assignment data, along with the system characteristics of the introduced commercial telecommunications equipment, will be used to perform the EMI analysis. EMI analysis techniques will be used to determine the potential for inband, adjacent band, harmonically related, and intermodulation interference. These techniques are designed to eliminate from further consideration those systems for which interference is not predicted using conservative analysis parameters.

For systems not eliminated in the conservative analysis, the Electromagnetic Spectrum Engineering Services (ESES) Contractor will conduct additional, more-detailed, analyses using additional JSC environmental analysis techniques. These techniques predict the effective on-tune received power levels considering the effects of transmitter power levels, harmonic levels, additional filtering provided by duplexers, etc., in the transmit path, transmitter antenna gain (in the direction of the victim receiver), receiver antenna gain (in the direction of the interfering transmitter), and receiver signal-filtering loss (frequency-dependent rejection).

The interference thresholds used in the EMI analysis will be based on interference-to-noise ratios (I/N) required for compatible operation as dictated by the specific modulation types involved in the interference interactions.

Deliverables: Results Memorandum followed by a CR

6.2 Task 2 – RADHAZ Analysis.

Upon verification of the characteristics data of the proposed commercial telecommunications system, an analysis will be performed using applicable DoD thresholds to determine distance separation requirements to avoid the potential for RADHAZ to personnel, fuel, and ordnance using EIDs.

Deliverables: To be delivered in the Task 1 Results Memorandum and CR

7. Performance Standards. Not Applicable.

8. Incentives. Not Applicable.

9. Place of Performance. The primary efforts associated with this TO PWS shall be performed at the government and the ESES Contractor facility. A site survey will not be performed as described in item 6.1.

Alternate Place of Performance - Contingency Only. As determined by the COR, contractor employees may be required to work at an alternate place of performance (e.g., home, the contractor's facility, or another approved activity within the local travel area) in cases of unforeseen conditions or contingencies (e.g., pandemic conditions, exercises, government closure due to inclement weather, etc.). Non-emergency/non-essential contractors should not report to a closed government facility. Contractor shall prepare all deliverables and other contract documentation utilizing contractor resources. To the extent possible, the contractor shall use best efforts to provide the same level of support as stated in the PWS. In the event the services are impacted, reduced, compromised, etc., the Contracting Officer or the contractor may request an equitable adjustment pursuant to the Changes clause of the contract.

10. Period of Performance. 240 calendar days after contract award.

11. Delivery Schedule.

Schedule of Deliverables	
Title	Schedule of Deliverables

Results Memorandum	8 Weeks after TO Award
Consulting Reports	4 weeks after the Results Memorandum is distributed

12. Security. Work performed under this TO will include the following classifications of work: UNCLASSIFIED, PROPRIETARY, FOR OFFICIAL USE ONLY, CONFIDENTIAL, and SECRET. A SECRET clearance will be required to perform daily duties. Periodic meetings will be held where individuals are often required to share data and gather information in a classified environment. Individuals must be able to obtain and maintain a SECRET Clearance.

13. Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI). Historical project files and reports will be provided. Site and system characteristics information for the installation proposed by the purchaser will be provided.

14. Other Pertinent Information or Special Considerations.

a. Identification of Possible Follow-on Work. Not applicable.

b. Identification of Potential Conflicts of Interest (COI). The ESES contractor shall identify any possible organizational conflict of interest (OCI) as defined in Subpart 9.5 of the Federal Acquisition Regulation. If there is an OCI, the ESES contractor must inform the COR and provide an OCI Mitigation Plan that identifies how the OCI is to be mitigated.

c. Identification of Non-Disclosure Requirements. Not applicable.

d. Packaging, Packing and Shipping Instructions. Not Applicable, provided in the base contract.

e. Inspection and Acceptance Criteria. Not Applicable, provided in the base contract.

f. Property Accountability. Not applicable.

15. Section 508 Accessibility Standards. Not applicable.

16. External Support. None.

17. Pricing Information. Information is obtained from Price List for MSP Support.

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0013	Destination	Government	Destination	Government

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0013	POP 30-APR-2015 TO 29-DEC-2015	N/A	DISA JOINT SPECTRUM CENTER <i>AK</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>AK</i> FOB: Destination	H98294

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50073  
AMOUNT: \$19,951.00  
CIN DOSMC500730013: \$19,951.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer

Name: *BC*  
Organization/Office Symbol: PL63  
Phone No.: *BC*  
E-Mail Address: *BC*

Contract Specialist

Name: *BC*  
Organization/Office Symbol: PL63  
Phone No: *BC*  
E-Mail Address: *BC*

Customer/COR/TM Point of Contact

Name: *BC*  
Organization/Office Symbol: DSO/JSC/OS351  
Phone No.: *BC*  
E-Mail Address: *BC*

Contractor Point of Contact

Contractor Legal Business Name:

DUNS: 083655498  
CAGE CODE: 9M715  
Contractor POC: Anne Hasselbrack  
E-Mail Address: [anne.hasselbrack@exclisinc.com](mailto:anne.hasselbrack@exclisinc.com)  
Phone Number: 301-867-2985

**OR**

Contractor POC: Michael Hayes Phone: 301-867-2956  
Email: [michael.hayes@exclisinc.com](mailto:michael.hayes@exclisinc.com)

(End of clause)

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)

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

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

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

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

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

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

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

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

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

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

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

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

## Combo

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

## Destination

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

### Routing Data Table\*

Field Name in WAWF	Data to be entered in WAWF
Pay Official DoDAAC	HQ0131
Issue By DoDAAC	HC1047
Admin DoDAAC	HC1047
Inspect By DoDAAC	H98294

Ship To Code	N/A
Ship From Code	N/A
Mark For Code	N/A
Service Approver (DoDAAC)	H98294
Service Acceptor (DoDAAC)	H98294
Accept at Other DoDAAC	N/A
LPO DoDAAC	N/A
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	N/A

---

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

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

*Bc*

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

*Bc*

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

(End of clause)



# ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. HC1047-07-D-0001		2. DELIVERY ORDER/ CALL NO. 0993		3. DATE OF ORDER/ CALL (YYYYMMDD) 2015 Apr 30		4. REQ./ PURCH. REQUEST NO. DOSMC50099		5. PRIORITY	
6. ISSUED BY DISA/PL63 P.O. BOX 549 FORT MEADE MD 20755-0549			CODE HC1047		7. ADMINISTERED BY (if other than 6)  <b>SEE ITEM 6</b>			CODE	
9. CONTRACTOR EXELIS INC. NAME ANNE HASSELBRACK AND 12975 WORLDGATE DR STE 700 ADDRESS HERNDON VA 20170-6008				CODE 9M715		FACILITY		10. DELIVER TO FOR POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>	
						13. DISCOUNT TERMS Net 30 Days		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	
14. SHIP TO <i>BC</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064			CODE H98294		15. PAYMENT WILL BE MADE BY DFAS CO/JAO ATTN: CAPSW/ORP2 P.O. BOX 369016 COLUMBUS OH 43236-9016			13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15	
16. TYPE OF ORDER		DELIVERY/ CALL		X		This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract. Reference your quote dated Furnish the following on terms specified herein. REF: JSC (T3816) 27 Feb 2015			

**ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH AND AGREES TO PERFORM THE SAME.**

NAME OF CONTRACTOR	SIGNATURE	TYPED NAME AND TITLE	DATE SIGNED (YYYYMMDD)
<input type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:			

17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE <b>See Schedule</b>					
18. ITEM NO.	19. SCHEDULE OF SUPPLIES/ SERVICES	20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT

<b>SEE SCHEDULE</b>					
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and entree.				TOTAL	\$46,019.00
24. UNITED STATES OF AMERICA <i>BC</i>					

27a. QUANTITY IN COLUMN 20 HAS BEEN  
 INSPECTED     RECEIVED     ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED

b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

c. DATE (YYYYMMDD)      d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE

28. SHIP NO.      29. DO VOUCHER NO.      30. INITIALS

f. TELEPHONE NUMBER      g. E-MAIL ADDRESS

PARTIAL     FINAL

36. I certify this account is correct and proper for payment.

a. DATE (YYYYMMDD)      b. SIGNATURE AND TITLE OF CERTIFYING OFFICER

31. PAYMENT  
 COMPLETE     PARTIAL     FINAL

32. PAID BY      33. AMOUNT VERIFIED CORRECT FOR

34. CHECK NUMBER

35. BILL OF LADING NO.

37. RECEIVED AT      38. RECEIVED BY      39. DATE RECEIVED (YYYYMMDD)

40. TOTAL CONTAINERS      41. S/R ACCOUNT NO.      42. S/R VOUCHER NO.

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0014		UNDEFINED	Labor Hours	UNDEFINED	\$46,019.00

Spectrum study at Kahuku  
 CPIF

Electromagnetic Environmental Effects (E3) and Spectrum Engineering -- analyzing equipment and systems for potential E3 problems and recommending solutions; performing radio frequency (RF) measurements as needed; assisting the acquisition community by assessing E3. Technical Advice -- analyzing national and international electromagnetic spectrum issues and advising decision-makers on the technical viability of policy and implementation options. See PWS. The contractor's proposal, titled "Spectrum Study at Kahuku Training Area (KTA) HI" ( T3816), dated 27 February 2015, is incorporated by reference.

Fee Percentage & Amounts:

Minimum [REDACTED]  
 Target [REDACTED] *By*  
 Maximum [REDACTED]

FOB: Destination

PURCHASE REQUEST NUMBER: DOSMC50099

TARGET COST	[REDACTED]	<i>By</i>
TARGET FEE	[REDACTED]	
TOTAL TGT COST + FEE	\$46,019.00	
MINIMUM FEE	[REDACTED]	
MAXIMUM FEE	[REDACTED]	<i>By</i>
SHARE RATIO ABOVE TARGET	[REDACTED]	
SHARE RATIO BELOW TARGET	[REDACTED]	
	\$46,019.00	

ACRN AA  
 CIN: DOSMC500990014

Section C - Descriptions and Specifications

PWS

PERFORMANCE WORK STATEMENT (PWS)  
SPONSOR PROGRAM  
As of 21 January 2015

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3816
Task Order Number:	0993
Type of Task Order	<input checked="" type="checkbox"/> Cost Plus Incentive Fee <input type="checkbox"/> Firm Fixed Price
Key Words	KTA, VHF, UHF, EMC/EMI, radio coverage
SPONSOR	
US Army Garrison, Aviation Division Air Traffic Control Office 397 Santos Dumont Avenue, Bldg. 207 Wheeler Army Airfield, HI 96854	

1. Contracting Officer Representative (COR).

a. Primary COR.

Name:	<i>BC</i>
Organization:	DISA DSO Joint Spectrum Center (JSC)
Department of Defense Activity Address Code (DODAAC):	H98294
Address:	DISA DSO JSC-OS351 2004 Turbot Landing Annapolis, MD 21402-5064
Phone Number:	<i>BC</i>
Fax Number:	(410) 293-9268
E-Mail Address:	<i>BC</i>

b. Alternate COR.

Name:	<i>BC</i>
Organization:	DISA DSO JSC
DODAAC:	H98294
Address:	DISA DSO JSC-OS351 2004 Turbot Landing Annapolis, MD 21402-5064
Phone Number:	<i>BC</i>
Fax Number:	(410) 293-9268
E-Mail Address:	<i>BC</i>

2. Contract or Task Order (TO) Title. Spectrum Study at Kahuku Training Area (KTA), HI

3. Background. KTA is an expanse of more than 7,600 acres situated at the northern end of the Koolau Mountain Range on the island of Oahu. KTA is subdivided into nine sections; there are also *BC* *BC/E* for tactical air operations. It is primarily used for US military tactical maneuver training, mountain

and jungle warfare training, and for air support with fixed and rotary winged aircraft. The training area is rugged and mountainous and suitable for light infantry. The size of the training area is adequate for battalion and brigade level training.

There is presently an area

*B7E*

sponsor will install CM-300/350 Air Traffic Control (ATC) Very High Frequency (VHF)/Ultra High Frequency (UHF) radio systems and requested the JSC to complete a spectrum study to confirm radio communications and coverage will be achieved for that area.

4. Objective. The objectives of this TO are to provide an Electromagnetic Compatibility (EMC)/Electromagnetic Interference (EMI) analysis and a radio coverage analysis of one each CM-300/350 air-to-ground VHF and UHF radio system with antennas proposed for installation

*B7E*

5. Scope. This PWS addresses tasking to be performed by the Electromagnetic Spectrum Engineering Services (ESES) contractor in the areas of:

- Electromagnetic Environmental Effects (E3) and Spectrum Engineering – analyzing equipment and systems for potential E3 problems and recommending solutions; performing radio frequency (RF) measurements as needed; assisting the acquisition community by assessing E3.
- Technical Advice – analyzing national and international electromagnetic spectrum issues and advising decision-makers on the technical viability of policy and implementation options.

6. Performance Requirements. The ESES contractor shall provide the following support:

6.1 Task 1 – EMC/EMI Analysis Support. Perform a two-way EMC/EMI analysis to identify any potential interference issues between the proposed CM-300/350 ATC radio systems with antennas on the tower adjacent to building 84 and existing RF systems in the electromagnetic environment (EME). Several telephone conferences with the Wheeler Army Airfield frequency manager and/or the sponsor may be required to obtain and validate technical data related to the proposed and existing RF systems. The proposed CM-300/350 systems will also operate with existing environmental RF systems both in-band and out-of-band, in geographical proximity to each other, and may have to operate simultaneously to achieve their mission goals.

The analysis will use linear and non-linear techniques to determine the potential for in-band, adjacent band, harmonically-related, and intermodulation (IM) interference. For the analysis of linear EMI effects, the EME shall include Frequency Resource Record System (FRRS) and Government Master File (GMF) assignments for systems within 75 miles of the proposed site operating in co-channel or adjacent channel frequency bands (defined as being within plus/minus 5 MHz of the CM-300/350 transmit/receive frequencies) and assignments for systems within 30 miles and operating in the second and third harmonically-related frequency bands. Federal Communications Commission (FCC) assignments for systems within 10 miles and operating in co-channel, adjacent-channel, or harmonically-related frequency bands shall also be identified. For the analysis of IM effects, a two-mile radius shall be used to identify all military, government, and commercial systems with frequency assignments between 30 MHz and 30,000 MHz.

For systems not eliminated for potential interference during the above analysis, the contractor shall conduct a more detailed analysis using techniques to predict on-tune undesired power levels considering the effects of transmitter power levels, emission characteristics, harmonic levels, additional filtering in the transmit path, transmitter antenna gain, receiver selectivity, receiver antenna gain, etc. The interference thresholds used in the EMI analysis will be based on the interference-to-noise power ratios (I/N) required for compatible operation as dictated by the specific modulation types involved in interference interactions. The analysis will include recommended techniques to mitigate any EMI issues that are identified during the analysis. The applicable frequencies for the analysis are 141.65 MHz and 239.5 MHz.

The deliverable will be a Results Memorandum that includes the following sections: Purpose or Background, Approach, Equipment Characteristics, Analysis, Results, and Recommendations.

Deliverable: Results Memorandum

6.2 Task 2 – Radio Coverage Analysis Support. The sponsor wants to ensure two-way radio communications are achieved to and from the proposed CM-300/350 ATC radio systems and selected RF transmitters/receivers in the electromagnetic environment (EME). Therefore, perform a two-way radio coverage analysis of the proposed CM-300/350 ATC radio systems to and from selected RF transmitters and receivers located in the EME. The analysis will consider the proposed VHF and UHF antennas transmitting/receiving RF systems as follows (nomenclature to be identified by the sponsor):

1. one each VHF and UHF ground-based mobile radio system
2. one each VHF and UHF airborne radio system with antennas 'ground level (AGL). The applicable frequencies for the analysis are 141.65 MHz and 239.5 MHz.

Use appropriate JSC-sanctioned models to produce map-based coverage plots, i.e., radio coverage predictions layered on a Google Earth map. The Deliverable will include eight oversize hard-copy plots as well as electronic plots on a digital versatile disk (DVD). Four plots will be required from the proposed antennas, to the selected RF systems in the EME, and four plots will be required from the selected RF system antennas to the CM-300/350 systems.

Deliverable: To be delivered in the Task 1 Results Memorandum

7. Performance Standards. The base contract Quality Assurance Surveillance Plan is incorporated by reference.

Performance Standard	Acceptable Quality Level (AQL)	Method of Surveillance
Tasks 6.1 and 6.2 – Results Memorandum	<p><b>Technical Requirements:</b> Percentage of technical requirements contained in the PWS that were met by the contractor. In addition, the deliverable must be complete and free from major technical errors before being accepted by the government. Meeting 95% of the requirements and being complete and free of major technical errors is an AQL.</p> <p>At most, the deliverable should contain only minor technical errors that, although they are minor, require fixing prior to delivering the final product to a sponsor. These technical errors should have no, or a very minor impact on the final conclusions drawn in the deliverable.</p> <p>Material in the deliverable must be presented in a logical easy to read, and unambiguous manner. All relevant data must be included in the deliverable. Conclusions must be fully supported by data and information in the deliverable. The deliverable must be accurate. The deliverable should reflect innovative solutions or unique insights to resolve problems. Information and graphics must be presented in a pleasing format.</p> <p>The deliverable must not require multiple returns to the contractor for editorial rework prior to being accepted by the DSO, user, or sponsor. The deliverable must be organized so that a typical reader can follow the flow of information, with any figures and tables properly marked and easily read. Minimal report rework post-delivery is an AQL.</p> <p><b>Schedule Requirement:</b> AQL is that the deliverable is delivered on-time. The delivery date is the date the contractor provides the deliverable to the government.</p> <p><b>Cost Requirement:</b> AQL is achieved when the cost charged to the TO for the product is equal to the target cost.</p>	Routine inspection of delivered product.

8. **Incentives.** The TO incentive fee will be composed of technical, schedule, and cost performance elements. Technical and schedule performance will each be worth 40% of the total fee. Cost performance will make up the remaining 20%.

**Technical.** Technical Performance will be evaluated on a scale of 1 to 5, according to how well the contractor meets the desired performance thresholds. An overall technical quality score of satisfactory (3.00) equates to the technical performance earning the target fee [REDACTED]. An overall unsatisfactory technical quality score (1.00) equates to earning the minimum technical performance fee [REDACTED]. An overall exceptional technical quality score (5.00) equates to earning the maximum technical performance fee [REDACTED]. The range of performance scores and the associated percentage fee earned is presented in the following table. B4

Score		Performance	Percent Fee	
Min	Max		Min	Max
1.00	1.49	Unsatisfactory	[REDACTED]	[REDACTED]
1.50	2.49	Marginal	[REDACTED]	[REDACTED]
2.50	3.49	Satisfactory	[REDACTED]	[REDACTED]
3.50	4.49	Very Good	[REDACTED]	[REDACTED]
4.50	5.00	Exceptional	[REDACTED]	[REDACTED]

**Schedule.** TO deliverables provided to the government within three days of the delivery date will be rated satisfactory and earn the target fee for schedule performance. Deliverables provided more than 10 days late will be rated unsatisfactory and earn the minimum schedule performance fee. Deliverables provided more than 10 days early will be rated exceptional and earn the maximum schedule fee.

**Cost.** Cost at target amount earns the target cost performance fee. Cost above, or below, the target amount will cause the cost performance fee to be proportionally increased or decreased by [REDACTED] for each dollar of variance. Cost performance fee cannot vary below the minimum or above the maximum amounts. B5

9. **Place of Performance.** The primary place of performance will be the ESES contractor facility, Bowie, MD with possible local travel to DSO facilities and within the National Capitol Region. The DSO sites are 2004 Turbot Landing, Annapolis, MD and 6916 Cooper Avenue, Fort George G. Meade, MD 20755-7901. All non-local travel shall be planned and conducted in support of the individual tasks contained in the TO. Written approval by the COR is required before non-local travel is conducted.

10. **Period of Performance (PoP).** 180 calendar days from the start of the TO.

As directed by the JSC COR, the contractor shall continue performance in emergency or mission essential conditions. Additionally, the contractor may be required to account for the whereabouts of their personnel should this information be requested by the COR.

11. **Delivery Schedule.**

PWS Task#	Deliverable Title	Format	Due Date*	Distribution / Copies	Frequency and Remarks
6.1 and 6.2	Technical Approach Review	MS Powerpoint	15 days after TO award	To JSC COR only	Once
6.1 and 6.2	Results Memorandum	MS Word	55 days after TO award	** Standard Distribution	Once

\*Working days  
\*\*Standard Distribution: 1 copy of the transmittal letter without the deliverable to the Contracting Officer (KO); 1 copy of the transmittal letter with the deliverable to the Primary COR.

12. Security. Work performed under this TO may include the following classifications of work: UNCLASSIFIED, PROPRIETARY, FOR OFFICIAL USE ONLY, CONFIDENTIAL, and SECRET. A SECRET clearance will be required to perform the analysis. A meeting may be held where individuals are required to share data and gather information in a classified SECRET environment. Individuals working on this TO must have and be able to maintain a SECRET Clearance.

13. Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI). The DSO will provide any GFI necessary to perform daily duties within the limitation of the contract and DoD security guidelines. The DSO will also provide historical project files and reports if available. The DSO reserves the right to restrict GFI in support of national security and DoD interests. In the event Government Furnished Property (GFP) is provided, it will be delivered to the DSO upon final completion of this project.

14. Other Pertinent Information or Special Considerations.

a. Identification of Possible Follow-on Work. Any additional tasking or increase/change in scope of work requested by the sponsor will be identified in a subsequent revision to the PWS. Follow-on support to the sponsor is not anticipated.

b. Identification of Potential Conflicts of Interest (COI). The contractor shall identify any possible organizational conflict of interest (OCI) as defined in Subpart 9.5 of the Federal Acquisition Regulation. If there is an OCI, the contractor must inform the KO and COR and provide an OCI Mitigation Plan that identifies how the OCI is to be mitigated.

c. Identification of Non-Disclosure Requirements. Not Applicable.

d. Packaging, Packing and Shipping Instructions. Not Applicable, provided in the base contract.

e. Inspection and Acceptance Criteria. Not Applicable, provided in the base contract.

f. Property Accountability. Not Applicable.

15. Section 508 Accessibility Standards. Not Applicable.

16. External Support. Not Applicable.

17. Pricing Information. Information to be provided by the contractor. Each task must be individually priced to include total labor hours, labor hours and cost broken out by labor categories, travel, purchases, etc.

18. Software Purchase. Any software to be purchased as a result of the implementation of this PWS shall be approved by the DSO Production Configuration Control Board (CCB) prior to the purchase. Requests shall be submitted not later than 10 business days prior to the intended purchase date. No software purchases may be made without the expressed approval by the DSO Production CCB. The content of this request shall include:

Software Vendor

Software Product/Version

Software Domain (e.g., Government off the Shelf, Commercial off the Shelf, Public Domain)

Software Function

DSO Organization: Division and Branch

TO Number

COR

Vendor Point of Contact Information

License type, Number of licenses

Estimated and Final License cost

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0014	Destination	Government	Destination	Government



Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0014	POP 30-APR-2015 TO 29-OCT-2015	N/A	DISA JOINT SPECTRUM CENTER <i>OK</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>OK</i> FOB: Destination	H98294

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50099  
AMOUNT: \$46,019.00  
CIN DOSMC500990014: \$46,019.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer  
Name: *BC*  
Organization/Office Symbol: PL63  
Phone No. *BC*  
E-Mail Address: *BC*

Contract Specialist  
Name: *BC*  
Organization/Office Symbol: PL63  
Phone No.: *BC*  
E-Mail Address: *BC*

Customer/COR/TM Point of Contact  
Name:  
Organization/Office Symbol: DSO/ISC/OS351  
Phone No.  
E-Mail Address:

Contractor Point of Contact  
Contractor Legal Business Name:  
DUNS: 0833655498  
CAGE CODE: 9M715  
Contractor POC: Anne Hasselbrack  
E-Mail Address: [anne.hasselbrack@exelisinc.com](mailto:anne.hasselbrack@exelisinc.com)  
Phone Number: 301-867-2985

OR  
Michael Hayes  
[Michael.hayes@exelisinc.com](mailto:Michael.hayes@exelisinc.com)  
301-867-2956

(End of clause)

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)

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

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

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

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

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

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

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

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

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

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

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

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

### Cost Vouchers

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

### Destination

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

#### Routing Data Table\*

Field Name in WAWF	Data to be entered in WAWF
Pay Official DoDAAC	HQ0131
Issue By DoDAAC	HC1047
Admin DoDAAC	HC1047
Inspect By DoDAAC	H98294
Ship To Code	H98294
Ship From Code	N/A
Mark For Code	N/A

Service Approver (DoDAAC)	H98294
Service Acceptor (DoDAAC)	H98294
Accept at Other DoDAAC	N/A
LPO DoDAAC	N/A
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	N/A

-----

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

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

*AK*

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

*BL*

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

(End of clause)

# ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 12

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. HC1047-07-D-0001		2. DELIVERY ORDER/ CALL NO. 0994		3. DATE OF ORDER/ CALL (YYYYMMDD) 2015 Apr 23		4. REQ./ PURCH. REQUEST NO. DOSMCS0100		5. PRIORITY					
6. ISSUED BY DISA/PL63 P.O. BOX 549 FORT MEADE MD 20755-0549			CODE HC1047		7. ADMINISTERED BY (if other than 6) CODE			8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER  (See Schedule if other)					
9. CONTRACTOR EXELIS INC. NAME ANNE HASSELBRACK AND 12975 WORLDGATE DR STE 700 ADDRESS HERNDON VA 20170-6008			CODE 9M715		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) <b>SEE SCHEDULE</b>		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED				
14. SHIP TO DISA JOINT SPECTRUM CENTER <i>BK</i> 2109 LUMBUR LANDING ANNAPOLIS MD 21402-5064			CODE H98294		15. PAYMENT WILL BE MADE BY CODE HQ0131 DFAS-CO/JAO ATTN: CAPSW/ORP2 P.O. BOX 369016 COLUMBUS OH 43236-9016			13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Item 15					
16. TYPE OF ORDER													
DELIVERY/ CALL		X	This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.							PURCHASE	Reference your quote dated		
Furnish the following on terms specified herein. REF: Anderson AFB, 12/14/2014													
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH. AND AGREES TO PERFORM THE SAME.													
NAME OF CONTRACTOR		SIGNATURE			TYPED NAME AND TITLE			DATE SIGNED (YYYYMMDD)					
<input type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies:													
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE  See Schedule													
18. ITEM NO.	19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT					
<b>SEE SCHEDULE</b>													
24. UNITED STATES OF AMERICA							25. TOTAL	\$31,722.00					
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.							<i>BK</i>	26. DIFFERENCES					
27a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED													
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE					c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE						
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE					28. SHIP NO.	29. DO VOUCHER NO.	30. INITIALS						
f. TELEPHONE NUMBER		g. E-MAIL ADDRESS								<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	32. PAID BY	33. AMOUNT VERIFIED CORRECT FOR	
36. I certify this account is correct and proper for payment.										34. CHECK NUMBER	35. BILL OF LADING NO.		
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER								<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	31. PAYMENT		
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO		42. S/R VOUCHER NO.			

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013	Andersen AFB T3805 FFP Provides full funding to support GTA Teleguam on Andersen AFB with Exelis Corp to provide an E3 Analysis, RADHAZ, CTS, LTE, AWS, MW, MSP of a proposed installation. Engineering Electromagnetic Support FFP Electromagnetic Spectrum Engineering/E3 Analysis and support as specified in Performance Work Statement (T3805). The contractor's proposal titled "GTA Teleguam on Andersen AFB with Exelis Corp dated 9 Decemder 2014 is incorporated by reference FOB: Destination PURCHASE REQUEST NUMBER: DOSMC50100	1	Each	\$31,722.00	\$31,722.00
				NET AMT	\$31,722.00
	ACRN AA CIN: DOSMC501000013				\$31,722.00

Section C - Descriptions and Specifications

PWS

PERFORMANCE WORK STATEMENT (PWS)  
SPONSOR PROGRAM  
as of 20/Nov/2014

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3805
Task Order Number:	0994

Type of Task Order	<input type="checkbox"/> Cost Plus Incentive Fee <input checked="" type="checkbox"/> Firm Fixed Price	(Check one box) (Double click on a box to check it.)
Key Words	GTA Teleguam, Andersen AFB, Guam, E3 Analysis, RADHAZ, CTS, LTE, AWS, MW, MSP	
SPONSOR		
GTA Teleguam 624 N. Marine Corp Drive Tamuning, Guam 96913		

1. Contracting Officer's Representative (COR).

a. Primary COR.

Name:	<i>BC</i>
Organization:	Joint Spectrum Center (JSC)/J8
Department of Defense Activity Address Code (DODAAC):	H98294
Address:	2004 Turbot Landing Annapolis, MD 21012-5064
Phone Number:	<i>BC</i>
Fax Number:	(410) 293-9268
E-Mail Address:	<i>BC</i>

b. Alternate COR.

Name:	TBD
Organization:	Joint Spectrum Center (JSC)/J8
DODAAC:	H98294
Address:	2004 Turbot Landing Annapolis, MD 21012-5064
Phone Number:	
Fax Number:	(410) 293-9268
E-Mail Address:	

2. Task Order (TO) Title. GTA Teleguam on Andersen AFB E3 Analysis Support

3. Background. The Telecommunications Act of 1996 directed the heads of all Federal Government departments and agencies to facilitate access by mobile service providers (MSPs) to Federal property for the purpose of siting equipment and mobile service antennas (MSAs). In response, the Department of Defense (DoD) Chief Information Officer (CIO) [formerly the Assistant Secretary of Defense for Command, Control, Communications, and



Intelligence (ASD C3I)] issued a policy memorandum regarding placement of commercial antennas on DoD property.<sup>1</sup>

The DoD CIO policy memorandum requires that Commanders and/or Agency Directors coordinate requests for the placement of new telecommunications services on Federal property with the DoD Joint Spectrum Center (JSC), and that the JSC evaluate the proposed antenna siting/telecommunication service for potential electromagnetic interference to the existing or planned telecommunications operations of the affected government facility. The memorandum further states that the requestor will reimburse the JSC for the cost of the evaluation.

GTA Teleguam, hereafter referred to as the purchaser, has requested permission to install and operate a Cellular Telephone System (CTS), a Long Term Evolution (LTE) systems, an Advanced Wireless Services (AWS) system, and a Microwave (MW) system on Andersen AFB, Guam.

4. Objectives. The objectives of this effort are to:

- Determine the potential for electromagnetic interference (EMI) from the proposed system transmitters to existing and planned military, government, and commercial communications-electronics (C-E) systems.
- Determine the potential for electromagnetic radiation hazards (RADHAZ) from the proposed system transmitters to personnel, fuel, and ordnance with electrically initiated devices (EIDs).

5. Scope. This PWS addresses tasking to be performed by the Electromagnetic Spectrum Engineering Services (ESES) contractor in the area of:

Electromagnetic Environmental Effects (E3) and Spectrum Engineering – coordinating electromagnetic compatibility (EMC) standards; analyzing equipment and systems for potential E3 problems and recommending solutions; performing radio frequency (RF) measurements; developing and conducting E3 training; assisting the acquisition community by assessing E3; determining operational frequency bands; and providing assistance in acquiring host nation approval for equipment operation.

6. Performance Requirements. The contractor shall provide E3 and RADHAZ analyses of the proposed installation. The results of the analysis will be documented in a memorandum followed by a Consulting Report (CR).

6.1 Task 1 – E3 Analysis.

Preliminary information from the sponsor will be used to conduct a search of military, government, and commercial frequency assignment databases to identify systems operating on government facilities in the vicinity of the site of interest. The electromagnetic environment (EME) will be compiled from the Frequency Resource Record System (FRRS), the Government Master File (GMF), and the Federal Communications Commission (FCC) frequency assignment databases at the JSC. For the analysis of linear EMI effects, the EME will include FRRS and GMF assignments for systems within 75 miles of the proposed site in co-channel or adjacent-channel frequency bands (within  $\pm 10$  MHz of the CTS, AWS, and LTE base station transmit frequency bands and  $\pm 20$  MHz of the MW band) and assignments for systems within 30 miles, operating in second and third harmonically related frequency bands. FCC assignments for systems within 10 miles operating in co channel, adjacent-channel, or second and third harmonically related frequency bands, will also be identified. The 75 mile radius will be used to include C-E equipment at other DoD and government facilities that could possibly receive signals from the proposed commercial transmitters.

For the analysis of non-linear EMI effects (intermodulation), the cosite EME will include FRRS, GMF, and FCC frequency assignments between 300 MHz and 30 GHz for systems within a two mile radius of the proposed site. The two mile radius is a conservative boundary for the analysis of non-linear EMI effects.

---

<sup>1</sup> Anthony M. Valletta, OASD (C3I) Memorandum to Secretaries of the Military Departments, et al., Subject: *Placement of Commercial Telecommunications Services on Federal Property*, Washington, DC: Assistant Secretary of Defense, Command, Control, Communications, and Intelligence, 15 December 1997.

A site survey will not be required. Coordination will be conducted with the purchaser, US Government Spectrum Management, and Base Safety personnel at the proposed site. Proposed system information will be verified with the sponsor. Environmental frequency assignment data will be reviewed and validated with the installation spectrum manager. Any data for frequency assignments not listed in the FRRS, GMF, or FCC databases will be used to augment the project EME.

The augmented frequency assignment data, along with the system characteristics of the introduced commercial telecommunications equipment, will be used to perform the EMI analysis. EMI analysis techniques will be used to determine the potential for inband, adjacent band, harmonically related, and intermodulation interference. These techniques are designed to eliminate from further consideration those systems for which interference is not predicted using conservative analysis parameters.

For systems not eliminated in the conservative analysis, the ESES Contractor will conduct additional, more-detailed, analyses using additional JSC environmental analysis techniques. These techniques predict the effective on-tune received power levels considering the effects of transmitter power levels, harmonic levels, additional filtering provided by duplexers, etc., in the transmit path, transmitter antenna gain (in the direction of the victim receiver), receiver antenna gain (in the direction of the interfering transmitter), and receiver signal-filtering loss (frequency-dependent rejection).

The interference thresholds used in the EMI analysis will be based on interference-to-noise ratios (I/N) required for compatible operation as dictated by the specific modulation types involved in the interference interactions.

Deliverables: Results Memorandum followed by a CR

#### 6.2 Task 2 – RADHAZ Analysis.

Upon verification of the characteristics data of the proposed commercial telecommunications system, an analysis will be performed using applicable DoD thresholds to determine distance separation requirements to avoid the potential for RADHAZ to personnel, fuel, and ordnance using EIDs.

Deliverables: To be delivered in the Task 1 Results Memorandum and CR

7. Performance Standards. Not Applicable.

8. Incentives. Not Applicable.

9. Place of Performance. The primary efforts associated with this TO PWS shall be performed at the government and the ESES Contractor facility. A site survey will not be performed as described in item 6.1.

Alternate Place of Performance - Contingency Only. As determined by the COR, contractor employees may be required to work at an alternate place of performance (e.g., home, the contractor's facility, or another approved activity within the local travel area) in cases of unforeseen conditions or contingencies (e.g., pandemic conditions, exercises, government closure due to inclement weather, etc.). Non-emergency/non-essential contractors should not report to a closed government facility. Contractor shall prepare all deliverables and other contract documentation utilizing contractor resources. To the extent possible, the contractor shall use best efforts to provide the same level of support as stated in the PWS. In the event the services are impacted, reduced, compromised, etc., the Contracting Officer or the contractor may request an equitable adjustment pursuant to the Changes clause of the contract.

10. Period of Performance. 240 calendar days after contract award.

11. Delivery Schedule.

Schedule of Tasks and Deliverables	
Title	Schedule of Deliverables
Results Memorandum	12 Weeks after Task Order Award
Consulting Reports	4 weeks after the Results Memorandum is distributed

12. Security. Work performed under this TO will include the following classifications of work: UNCLASSIFIED, PROPRIETARY, FOR OFFICIAL USE ONLY, CONFIDENTIAL, and SECRET. A SECRET clearance will be required to perform daily duties. Periodic meetings will be held where individuals are often required to share data and gather information in a classified environment. Individuals must be able to obtain and maintain a SECRET Clearance.

13. Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI). Historical project files and reports will be provided. Site and system characteristics information for the installation proposed by the purchaser will be provided.

14. Other Pertinent Information or Special Considerations.

a. Identification of Possible Follow-on Work. Not applicable.

b. Identification of Potential Conflicts of Interest (COI). The ESES contractor shall identify any possible organizational conflict of interest (OCI) as defined in Subpart 9.5 of the Federal Acquisition Regulation. If there is an OCI, the ESES contractor must inform the COR and provide an OCI Mitigation Plan that identifies how the OCI is to be mitigated.

c. Identification of Non-Disclosure Requirements. Not applicable.

d. Packaging, Packing and Shipping Instructions. Not Applicable, provided in the base contract.

e. Inspection and Acceptance Criteria. Not Applicable, provided in the base contract.

f. Property Accountability. Not applicable.

15. Section 508 Accessibility Standards. Not applicable.

16. External Support. None.

17. Pricing Information. Information is obtained from Price List for MSP Support.

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0013	Destination	Government	Destination	Government

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0013	POP 30-APR-2015 TO 29-DEC-2015	N/A	DISA JOINT SPECTRUM CENTER · <del>SC</del> ; 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <del>SC</del> FOB: Destination	H98294

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50100  
AMOUNT: \$31,722.00  
CIN DOSMC501000013: \$31,722.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer

Name *BL*

Organization/Office Symbol: PL63

Phone No.: *BL*

E-Mail Address: *BL*

Contract Specialist

Name: *BL*

Organization/Office Symbol: PL63

Phone No.: *BL*

E-Mail Address: *BL*

Customer/COR/TM Point of Contact

Name: *BL*

Organization/Office Symbol: DSO/JSC/OS351

Phone No.: *BL*

E-Mail Address: *BL*

Contractor Point of Contact

Contractor Legal Business Name:

DUNS: 0833655498

CAGE CODE: 9M715

Contractor POC: Anne Hasselbrack

E-Mail Address: [anne.hasselbrack@exelisinc.com](mailto:anne.hasselbrack@exelisinc.com)

Phone Number: 301-867-2985

OR

Contractor POC:

Name: Michael Hayes

Email: [michael.hayes@exelisinc.com](mailto:michael.hayes@exelisinc.com)

Phone: 301-867-2956

(End of clause)

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)

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

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

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

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

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

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

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

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

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

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

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

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

**Combo**

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

**Destination**

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

Routing Data Table\*

Field Name in WAWF	Data to be entered in WAWF
Pay Official DoDAAC	HQ0131
Issue By DoDAAC	HC1047
Admin DoDAAC	HC1047
Inspect By DoDAAC	H98294
Ship To Code	N/A



Ship From Code	N/A
Mark For Code	N/A
Service Approver (DoDAAC)	H98294
Service Acceptor (DoDAAC)	H98294
Accept at Other DoDAAC	N/A
LPO DoDAAC	N/A
DCAA Auditor DoDAAC	N/A
Other DoDAAC(s)	N/A

---

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

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

*BL*

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

Name:  
Email:  
Phone:

*BL*

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

(End of clause)