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HC1047-07-D-0001 0991 Page 2 of 12

\$28,729.00

Section B - Supplies or Services and Prices

ITEM NO 0013	SUPPLIES/SERVICES FFP Engineering FFP Engineering Electromagne Engineering/E3 Analysis a Statement (T3803). The c E3 Analysis Support" date FOB: Destination PURCHASE REQUEST F	and support as spectrum contractor's proposa ad 24 November 20	cified in the Pe al titled "Sprint 014 is incorpor	rformance Work Nextel on Fort McCoy,	AMOUNT \$28,729.00
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ACRN AA CIN: DOSMC500890013

HC1047-07-D-0001 0991 Page 3 of 12

Section C - Descriptions and Specifications

<u>PWS</u>

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	Cost Plus Incentive Fee	(Check one box) (Double click on a box to check it.)				
Key Words	Key Words Sprint Nextel, Fort McCoy, E3 Analysis, RADHAZ, PCS, LTE, MSP					
	SPONSC	R				
	Sprint Nextel					
5600 N. River Rd., STE 200						
Rosemont IL 60018						

1. Contracting Officer's Representative (COR).

a. Primary COR.

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

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. <u>Background</u>. 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 C31)] issued a policy memorandum regarding placement of commercial antennas on DoD property.¹

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. <u>Scope</u>. 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. <u>Performance Requirements</u>. 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 ± 10 MHz of thePCS 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

¹ 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. <u>Place of Performance</u>. 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.

HC1047-07-D-0001 0991 Page 6 of 12

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. <u>Security</u>. Work performed under this TO will include the following classifications of work: UNCLASSIFIED, PROPRIETORY, 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. <u>Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI)</u>. 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. <u>Identification of Potential Conflicts of Interest (COI)</u>. 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.

HC1047-07-D-0001 0991 Page 7 of 12

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

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

HC1047-07-D-0001 0991 Page 8 of 12

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Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP
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DISA JOINT SPECTRUM CENTER H98294 : BK 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 K COD D. C.

FOB: Destination

HC1047-07-D-0001 0991 Page 9 of 12

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

HC1047-07-D-0001 0991 Page 10 of 12

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer Name: β (. Organization/Office Symbol: PL63 Phone No.: β (. E-Mail Address: δ (.

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

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 Phone Number: 301-867-2985

OR

Contractor POC: Name: Michael Hayes Email: <u>michael.hayes@exelisinc.com</u> 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

HC1047-07-D-0001 0991 Page 12 of 12

Pay Official DoDAAC	HQ0131	
Issue By DoDAAC	•	
Admin DoDAAC	HC1047	
	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.

86

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(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 Emai: Phone

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

(End of clause)

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HC1047-07-D-0001 0992 Page 2 of 12

Section B - Supplies or Services and Prices

ITEM NO 0013	SUPPLIES/SERVICES	QUANTITY 1	UNIT Each	UNIT PRICE \$19,951.00	AMOUNT \$19,951.00
	Verizon Wireless on Kian FFP	nichi Mountain			
	Engineering Electromagne Engineering/E3 Anatysis a (T3779). The contractor's Kiamichi Mountain E3 Ar is incorporated by reference FOB: Destination PURCHASE REQUEST N	and support as spe proposal titled "V alysis Support wit ce.	cified in Perfo erizon Wireles h Exelis Corp	rmance Work Statement	

NET AMT \$19,951.00 \$19,951.00

ACRN AA CIN: DOSMC500730013

HC1047-07-D-0001 0992 Page 3 of 12

Section C - Descriptions and Specifications

<u>PWS</u>

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	Cost Plus Incentive Fee	(Check one box) (Double click on a box to check it.)		
Key Words	Verizon Wireless, Kiamichi M	ountain, E3 Analysis, RADHAZ, LTE, MW, MSP		
	SPONS	DR		
	Verizon Wi	reless		
One Allied Drive				
	Little Rock, A	R 72202		

1. Contracting Officer's Representative (COR).

a. Primary COR.

Name:	B
Organization:	Joint Spectrum Center (JSC)/OS351
Department of Defense Activity Address Code (DODAAC):	H98294
Address:	2004 Turbot Landing Annapolis, MD 21012-5064
Phone Number:	56
Fax Number:	(410) 293-9268
E-Mail Address:	

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. <u>Background</u>. 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

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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).

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¹ 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. <u>Place of Performance</u>. 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	đ	

HC1047-07-D-0001 0992 Page 6 of 12

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

12. <u>Security</u>. Work performed under this TO will include the following classifications of work: UNCLASSIFIED, PROPRIETORY, 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. <u>Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI)</u>. 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. <u>Identification of Potential Conflicts of Interest (COI)</u>. 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.

HC1047-07-D-0001 0992 Page 7 of 12

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN INSPECT AT 0013 Destination

INSPECT BY Government ACCEPT AT Destination

ACCEPT BY Government

HC1047-07-D-0001 0992 Page 8 of 12

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY

0013 POP 30-APR-2015 TO N/A 29-DEC-2015

SHIP TO ADDRESS

UIC

H98294

DISA JOINT SPECTRUM CENTER & 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 & FOB: Destination

HC1047-07-D-0001 0992 Page 9 of 12

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50073 AMOUNT: S19,951.00 CIN DOSMC500730013: \$19,951.00

HC1047-07-D-0001 0992 Page 10 of 12

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer Name: Corganization/Office Symbol: PL63 Phone No.: E-Mail Address: Contracting Officer Contracting Co

Contract Specialist Name *BL* Organization/Office Symbol: PL63 Phone Nc *BL* E-Mail Address: *BL*

 Customer/COR/TM Point of Contact

 Name:
 &

 Organization/Office Symbol:
 DSO/JSC/OS351

 Phone No.:
 &

 E-Mail Address:
 &

 Contractor Point of Contact

Contractor Legal Business Name: DUNS: 083655498 CAGE CODE: 9M715 Contractor POC: Anne Hasselbrack E-Mail Address: anne.hasslbrack/acxelisine.com Phone Number: 301-867-2985

OR

Contractor POC: Michael Hayes Phone: 301-867-2956 Email: michael hayesta exclision 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.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

HC1047-07-D-0001 0992 Page 12 of 12

(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.

Bi

(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.

Be

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

(End of clause)

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HC1047-07-D-0001 0993 Page 2 of 13

Section B - Supplies or Services and Prices

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

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:



FOB: Destination

PURCHASE REQUEST NUMBER: DOSMC50099

TARGET COST TARGET FEE TOTAL TGT COST + FEE MINIMUM FEE MAXIMUM FEE SHARE RATIO ABOVE TARGET SHARE RATIO BELOW TARGET



ACRN AA CIN: DOSMC500990014

HC1047-07-D-0001 0993 Page 3 of 13

Section C - Descriptions and Specifications

<u>PWS</u>

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	Cost Plus Incentive Fee	
Key Words	Firm Fixed Price 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:	BC
Organization:	DISA DSO Joint Spectrum Center (JSC)
Department of Defense Activity Address Code (DODAAC):	H98294
Address:	DISA DSO JSC-OS351 2004 Turbot Landing
Phone Number:	Annapolis, MD 21402-5064
Fax Number: E-Mail Address:	(410) 293-9268

b. Alternate COR.

Name:	36
Organization: DODAAC:	DISA DSO JSC
Address:	H98294
Address.	DISA DSO JSC-OS351
L	2004 Turbot Landing
Phone Number:	Annapolis, MD 21402-5064
Fax Number:	(410) 293-9268
E-Mail Address:	

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

3. <u>Background</u>. 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 :

 β_2 for tactical air operations. It is primarily used for US military tactical maneuver training, mountain

e

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

BIE

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. <u>Objective</u>. 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 \mathcal{B}/\mathcal{E}

5. <u>Scope</u>. 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. <u>Performance Requirements</u>. The ESES contractor shall provide the following support:

6.1 <u>Task 1 – EMC/EMI Analysis Support</u>. 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 <u>2 - Radio Coverage Analysis Support</u>. 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 BIE

RF systems as follows (nomenclature to be identified by the sponsor): BIE

1. one each VHF and UHF ground-based mobile radio system SIE

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.

87E

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 OTE

, to the selected RF systems in the EME, and four plots will be required from the selected GIE 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.

Tasks 6.1 and 6.2 - ResultsTechnical Requirements: 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. 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. Material in the deliverable must be presented in a logical casy 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. 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.Schedule Requirement: AQL is that the deliverable is delivered on-time. The delivery date is the date the contractor provides the delivery is an AQL.	Performance Standard	Acceptable Quality Level (AQL)	Method of
i a stat the product is equal to the target cost.		 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 <u>95%</u> of the requirements and being complete and free of major technical errors is an AQL. 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. 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. 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. Schedule Requirement: AQL is that the deliverable is delivered to the government. 	Surveillance Routine inspection of delivered product.

HC1047-07-D-0001 0993 Page 6 of 13

8. <u>Incentives</u>. 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%.

<u>Technical</u>. 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 technical An overall unsatisfactory technical quality score (1.00) equates to earning the minimum technical performance fee technical An overall exceptional technical quality score (5.00) equates to earning the maximum technical performance fee technical performance

Score			Dones	nt Fee
Min	Max	- Performance -		
1.00	1.49	Unsatisfactory	Min	Max
1.50	2.49	Marginal		
2.50	3.49	Satisfactory		
3.50	4.49	Very Good		
4.50	5.00	Exceptional		

<u>Schedule</u>. 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.

<u>Cost</u>. 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 \mathbf{x} for each dollar of variance. \mathbf{y} Cost performance fee cannot vary below the minimum or above the maximum amounts.

9. <u>Place of Performance</u>. 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

**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.

HC1047-07-D-0001 0993 Page 7 of 13

12. <u>Security</u>. 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. <u>Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI)</u>. 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. <u>Identification of Possible Follow-on Work</u>. 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. <u>Identification of Potential Conflicts of Interest (COI)</u>. 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. <u>Pricing Information</u>. 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. <u>Software Purchase</u>. 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

HC1047-07-D-0001 0993 Page 8 of 13

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN INSPECT AT 0014 Destination INSPECT BY Government ACCEPT AT Destination

ACCEPT BY Government

HC1047-07-D-0001 0993 Page 9 of 13

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 SC 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064	H98294

FOB: Destination

HC1047-07-D-0001 0993 Page 10 of 13

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: & Organization/Office Symbol: PL63 Phone No. SC E-Mail Address: SC

Contract Specialist Name: δC Organization/Office Symbol: PL63 Phone No.: δC E-Mail Address: $\int \delta C$

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: <u>anne.hasselbrack@exclisine.com</u> Phone Number: 301-867-2985

OR Michael Hayes <u>Michael.hayes@exelisinc.com</u> 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.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).

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 Issue By DoDAAC Admin DoDAAC Inspect By DoDAAC Ship To Code	HQ0131 HC1047 HC1047 H98294 H98294 N/A
Ship From Code Mark For Code	N/A N/A
HC1047-07-D-0001 0993 Page 13 of 13

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.

(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 F	FOR SUPP	LIES OR	SERVIC	ES			1	PAGEIOF	12
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HC1047-07-D-0001 0994 Page 2 of 12

\$31,722.00

Section B - Supplies or Services and Prices

ITEM NO 0013	SUPPLIES/SERVICES Andersen AFB T3805 FFP Provides full funding to st Corp to provide an E3 An proposed installation. Eng Spectrum Engineering/E3 Statement (T3805). The of AFB with Exelis Corp da FOB: Destination PURCHASE REQUEST M	alysis, RADHAZ, ineering Electroma Analysis and supp contractor's propos- ted 9 December 20	CTS, LTE. AV agnetic Suppor ort as specifie al titled "GTA D14 is incorpor	VS, MW, MSP of a t FFP Electromagnetic d in Performance Work Teleguam on Andersen		MOUNT
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ACRN AA CIN: DOSMC501000013

HC1047-07-D-0001 0994 Page 3 of 12

Section C - Descriptions and Specifications

<u>PWS</u>

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	Cost Plus Incentive Fee	(Check one box) (Double click on a box to check it.)			
Key Words	GTA Teleguam, Andersen AFB, AWS, MW, MSP	Guam, E3 Analysis, RADHAZ, CTS, LTE,			
	SPONSOF	ξ			
GTA Teleguam					
624 N. Marine Corp Drive					
	Tamuning, Guam	96913			

1. Contracting Officer's Representative (COR).

a. Primary COR.

Name:	BL	
Organization:	Joint Spectrum Center (JSC)/J8	
Department of Defense Activity Address Code (DODAAC):	H98294	
Address:	2004 Turbot Landing Annapolis, MD 21012-5064	
Phone Number:	- BG	
Fax Number:	(410) 293-9268	
E-Mail Address:	<i>B</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. <u>Background</u>. 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.¹

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. <u>Scope</u>. 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. <u>Performance Requirements</u>. 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 ±10 MHz of the CTS, AWS, and LTE base station transmit frequency bands and ±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.

¹ 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.

HC1047-07-D-0001 0994 Page 5 of 12

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. <u>Place of Performance</u>. 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.

Schee	lule 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. <u>Security</u>. Work performed under this TO will include the following classifications of work: UNCLASSIFIED, PROPRIETORY, 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. <u>Government-Furnished Equipment (GFE)/Government-Furnished Information (GFI)</u>. 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. <u>Identification of Potential Conflicts of Interest (COI)</u>. 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.

HC1047-07-D-0001 0994 Page 7 of 12

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

HC1047-07-D-0001 0994 Page 8 of 12

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 SC S 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 SC FOB: Destination	H98294

HC1047-07-D-0001 0994 Page 9 of 12

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

HC1047-07-D-0001 0994 Page 10 of 12

Section I = Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

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

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

Customer/COR/TM Point of Contact Name: & Organization/Office Symbol: DSO/JSC/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: <u>anne.hasselbrack@exelisine.com</u> Phone Number: 301-867-2985

OR

Contractor POC: Name: Michael Hayes Email: <u>michael.hayes@exelisinc.com</u> 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

HC1047-07-D-0001 0994 Page 12 of 12

Mark For Code N/A Mark For Code N/A Service Approver (DoDAAC) H98 Service Acceptor (DoDAAC) H98 Accept at Other DoDAAC N/A LPO DoDAAC N/A DCAA Auditor DoDAAC N/A Other DoDAAC(s) N/A	294 294
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(4) Payment request and supporting documentation. The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

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

(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)