

# ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 10

1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. HC1047-07-D-0001		2. DELIVERY ORDER/ CALL NO. 0975		3. DATE OF ORDER/ CALL (YYYYMMDD) 2015 Mar 26		4. REQ./PURCH. REQUEST NO. DOSMC50075		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			SEE ITEM 6			
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) SEE SCHEDULE		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 2104 TORBUI 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 <input checked="" type="checkbox"/>		PURCHASE <input type="checkbox"/>		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: T3784, 11/3/2014					
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	
		SEE SCHEDULE									
		24. UNITED STATES OF AMERICA							25. TOTAL	\$28,729.00	
		* 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.							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.											
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER			31. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				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	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013 EXERCISED OPTION	Engineering Support on JB Andrews FFP Engineering Electromagnetic Support FFP Electromagnetic Spectrum Engineering/E3 Analysis and support as specified in Performance Work Statement (T3784). The contractor's proposal titled "Verizon Wireless on Joint Base Andrews with Exelis Corp dated 03 November 2014 is incorporated by reference. FOB: Destination PURCHASE REQUEST NUMBER: DOSMC50075	1	Each	\$28,729.00	\$28,729.00
				NET AMT	\$28,729.00
ACRN AA CIN: DOSMC500750013					\$28,729.00

Section C - Descriptions and Specifications

PWS

PERFORMANCE WORK STATEMENT (PWS)  
SPONSOR PROGRAM  
as 7/Oct/2014

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3784
Task Order Number:	0975

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, Joint Base Andrews, E3 Analysis, RADHAZ, LTE, MSP	
SPONSOR		
Verizon Wireless 9000 Junction Drive Annapolis Junction, MD 20701		

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:		
Fax Number:		
E-Mail Address:	<i>B6</i>	

b. Alternate COR.

Name:	<i>B6</i>	
Organization:	JSC/OS351	
DODAAC:	H98294	
Address:	2004 Turbot Landing Annapolis, MD 21012-5064	
Phone Number:		
Fax Number:		
E-Mail Address:	<i>B6</i>	

2. Task Order (TO) Title. Verizon Wireless on Joint Base Andrews 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 three Long Term Evolution (LTE) systems on Joint Base (JB) Andrews, MD.

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 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

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<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 31-MAR-2015 TO 30-NOV-2015	N/A	DISA JOINT SPECTRUM CENTER <i>bc</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>et</i> FOB: Destination	H98294



Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50075  
AMOUNT: \$28,729.00  
CIN DOSMC500750013: \$28,729.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

252.232-7006 Wide Area WorkFlow Payment Instructions

MAY 2013

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer

Name: ~~EC~~  
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: (JSC) OS351  
Phone No.: ~~BC~~  
E-Mail Address: ~~BC~~

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  
Phone: 301-867-2956

(End of clause)

**ORDER FOR SUPPLIES OR SERVICES**

1. CONTRACT/PURCH ORDER/ AGREEMENT NO <b>HC1047-07-D-0001</b>				2. DELIVERY ORDER/ CALL NO <b>0978</b>		3. DATE OF ORDER/ CALL (YYYYMMDD) <b>2015 Apr 23</b>		4. REQ/ PURCH REQUEST NO <b>DOSMC50097</b>		5. PRIORITY	
6. ISSUED BY DISA/PL63 P O BOX 549 FORT MEADE MD 20755-0549				CODE: <b>HC1047</b>		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 20170-6008				CODE: <b>9M715</b>		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		13. MAIL INVOICES TO THE ADDRESS IN BLOCK <b>See Item 15</b>	
14. SHIP TO DEFENSE PROGRAM CENTER <b>6c</b> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064				CODE: <b>H98294</b>		15. PAYMENT WILL BE MADE BY CODE: <b>HQ0131</b>  DFAS-CO/JAQ ATTN: CAPSW/ORP2 P.O. BOX 369016 COLUMBUS OH 43236-9016				MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.	
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									
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 encircle.						24. UNITED STATES OF AMERICA  <b>6c</b>		25. TOTAL <b>571,433.00</b>		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.											
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER									
						31. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		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
0013	Engineering Electromagnetic Support FFP Electromagnetic Spectrum Engineering/E3 Analysis and support as specified in the Performance Work Statement (T3774). The contractor's proposal titled "AT&T Mobility on Fort Stewart E3 Analysis Support" dated 2 October 2014 is incorporated by reference. FOB: Destination PURCHASE REQUEST NUMBER: DOSMC50097	1	Each	\$72,423.00	\$72,423.00
				MAX NET AMT	\$72,423.00
	ACRN AA CIN: DOSMC500970013				\$72,423.00

Section C - Descriptions and Specifications

PERFORMANCE WORK STATEMENT

PERFORMANCE WORK STATEMENT (PWS)  
SPONSOR PROGRAM  
as of 3/Sept/2014

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3774
Task Order Number:	

Type of Task Order	<input type="checkbox"/> Cost Plus Incentive Fee	(Check one box) (Double click on a box to check it.)
	<input checked="" type="checkbox"/> Firm Fixed Price	
Key Words	AT&T Mobility, Fort Stewart, E3 Analysis, RADHAZ, PCS, LTE, WCS, MSP	
<b>SPONSOR</b>		
AT&T Mobility LLC 660 Hembree Parkway Rosewell, GA 30076		

1. Contracting Officer's Representative (COR).

a. Primary COR.

Name:	<i>SG</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>SG</i>
Fax Number:	(410) 293-9268
E-Mail Address:	<i>SG</i>

b. Alternate COR.

Name:	
Organization:	
DODAAC:	
Address:	
Phone Number:	
Fax Number:	
E-Mail Address:	

2. Task Order (TO) Title. AT&T Mobility on Fort Stewart 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.**

AT&T Mobility, hereafter referred to as the purchaser, has requested permission to install and operate a Personal Communications Service (PCS) system, a Cellular Telephone System (CTS), three Long Term Evolution (LTE) systems, and a Wireless Communications Service (WCS) system on two sites at Fort Stewart.

**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.**

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<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.

**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, CTS, WCS, 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 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	20 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 24-APR-2015 TO 23-DEC-2015	N/A	DISA JOINT SPECTRUM CENTER <i>26</i> <i>3</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>2</i> FOB: Destination	H98294

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50097  
AMOUNT: \$72,423.00  
CIN DOSMC500970013: \$72,423.00

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

**Contracting Officer**

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

**Contract Specialist**

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

**Customer/COR/TM Point of Contact**

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

**Contractor Point of Contact**

Contractor Legal Business Name: Exelis  
DUNS: 083655498  
CAGE CODE: 9M715  
Contractor POC: Anne Hasselbrack  
E-Mail Address: anne.hasselbrack@exelisinc.com  
Phone Number: 301.867.2985  
Technical POC: Michael Hayes  
E-Mail Address: Michael.hayes@exelisinc.com  
Phone Number: 301.867.2956  
(End of clause)

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

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 Central Contractor Registration 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.

GOVERNMENT

(Contracting Officer: Insert inspection and acceptance locations or "Not applicable".)

(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	<u>N/A</u>
Mark For Code	<u>N/A</u>
Service Approver (DoDAAC)	H98294

Service Acceptor (DoDAAC)	H98294
Accept at Other DoDAAC	<u>N/A</u>
LPO DoDAAC	<u>N/A</u>
DCAA Auditor DoDAAC	<u>N/A</u>
Other DoDAAC(s)	<u>HAA031</u>

-----  
(\*Contracting Officer: Insert applicable DoDAAC information or "See schedule" if multiple ship to/acceptance locations apply, or "Not applicable.")

(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.

Reference clause 52.204-9000, Point of Contact, for Contracting Officer, Contract Specialist, Customer/COR/ and Contractor Point of Contact Information.

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

(End of clause)



Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0014		UNDEFINED	Labor Hours	UNDEFINED	\$55,223.00
EXERCISED OPTION	CPIF Engineering Support CPIF				

Electromagnetic Spectrum Engineering services as specified in the Performance Work Statement (PWS). The contractor's proposal titled "EMC Study for SMDC Microwave Links" dated: 15 August 2014 is incorporated by reference.

Fee Percentages & Amounts:

Minimum [REDACTED] *B-1*  
 Target [REDACTED] *B-1*  
 Maximum [REDACTED] *B-1*

Period of Performance: April 06 2015 through January 05 2016

FOB: Destination

PURCHASE REQUEST NUMBER: DOSMC50091

TARGET COST	[REDACTED] <i>PF</i>
TARGET FEE	[REDACTED] <i>PF</i>
TOTAL TGT COST + FEE	<hr/> \$55,223.00
MINIMUM FEE	\$0.00
MAXIMUM FEE	\$0.00
SHARE RATIO ABOVE TARGET	
SHARE RATIO BELOW TARGET	



ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
001401		UNDEFINED		UNDEFINED	\$0.00

Funding For CLIN 0014  
CPIF

The purpose of this SUBCLIN is to provide cost funding for CLIN 0014 via MIPR DOSMC50091.

FOB: Destination

TARGET COST	UNDEFINED
TARGET FEE	UNDEFINED
TOTAL TGT COST + FEE	<u>\$0.00</u>
MINIMUM FEE	\$0.00
MAXIMUM FEE	\$0.00

SHARE RATIO ABOVE TARGET

SHARE RATIO BELOW TARGET

ACRN AA  
CIN: DOSMC50091001401

██████████ *PF*

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
001402		UNDEFINED		UNDEFINED	\$0.00

Funding For CLIN 0014  
CPIF

The purpose of this SUBCLIN is to provide fee funding for CLIN 0014 via MIPR DOSMC50091.

FOB: Destination

TARGET COST	UNDEFINED
TARGET FEE	UNDEFINED
TOTAL TGT COST + FEE	<u>\$0.00</u>
MINIMUM FEE	\$0.00
MAXIMUM FEE	\$0.00

SHARE RATIO ABOVE TARGET

SHARE RATIO BELOW TARGET

ACRN AA  
CIN: DOSMC50091001402

██████████ *PF*

Section C - Descriptions and Specifications

PERFORMANCE WORK STATEMENT (PWS)  
SPONSOR PROGRAM  
As of 23 July 2014

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3755
Task Order Number:	0979

Type of Task Order	<input checked="" type="checkbox"/> Cost Plus Incentive Fee	
	<input type="checkbox"/> Firm Fixed Price	
Key Words	SMDC, SMDBL, Tysons Corner, Suitland, Mark Center	
SPONSOR		
Space & Missile Defense Command SMDC-FWB-I Martin Road, Building 5220 Redstone Arsenal, AL 35898-0001		

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. EMC Study for SMDC Microwave Links

3. Background. The US Army Space and Missile Defense Command (SMDC) is the Army Service Component to the US Strategic Command. SMDC missions are global in nature and provide space operations, information

operations, global strike, integrated missile defense, etc. The SMD Battle Lab (SMDBL) links the technologist and the warfighter through experiments simulating modern battlefield conditions using computer simulations, interfaces and networks.

SMDBL requested approval from the Fort Belvoir-Network Enterprise Center (FB-NEC) to install and operate four microwave (MW) systems on the Tysons Corner, VA Corps of Engineers (COE) tower and one MW system on the Suitland, MD COE tower. The FB-NEC has jurisdictional responsibility for multiple Federal government communications sites in the National Capital Region (NCR), including the COE towers in Tysons Corner and Suitland. SMDBL also requested approval from the Washington Headquarters Services Facilities Directorate, Leased Facilities Division, Fort Belvoir Mark Center Building Management Office (FBMCBMO) to install and operate two MW systems on the existing platform mast mounted on the roof of the Mark Center (East), Alexandria, VA. The FBMCBMO is responsible for managing all radio frequency (RF) devices on the Mark Center buildings. All of the proposed MW systems will have transmit/receive capabilities and will operate in the C-band.

A two-way electromagnetic compatibility (EMC) analysis will be completed prior to approval of the installation of the proposed MW systems at the aforementioned three site locations. This analysis will predict if there will be any unacceptable interference either to or from the proposed MW systems and the existing RF systems on the towers and also in the electromagnetic environment (EME), as defined below. The analysis results will be provided in two separate Results Memorandums followed by two separate consulting reports (CR) - one each for Tysons Corner, VA and Suitland, MD, and one each for the Mark Center, Alexandria, VA.

4. Objective. The objective of this TO is to provide an EMC analysis of MW systems proposed for installation on the COE towers in Tysons Corner, VA and Suitland, MD and on the existing platform mast on the roof of the Mark Center (East), Alexandria, VA.

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 RF measurements as needed; assisting the acquisition community by assessing E3;
- Technical Advice – analyzing electromagnetic spectrum issues and advising decision-makers on the technical viability of policy and implementation options.

6.1 Task 1 – EMC Analysis Support. Perform an EMC analysis to identify any potential interference issues between the proposed MW systems and existing environmental RF systems on the above identified towers/roof mast and in the EME. Several telecons with the FB-NEC, FBMCBMO, and/or sponsor may be required. The proposed systems will 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 utilize 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 FRRS, GMF, and FCC frequency assignments for systems within 50 km of each of the proposed sites operating in co-channel, adjacent-channel (defined as within plus/minus 20 MHz of the proposed MW systems transmit/receive frequencies), and second/third harmonically-related frequency bands. For the analysis of IM effects, a 4 km radius shall be used to identify all military, government, and commercial systems with frequency assignments between 300 MHz and 30,000 MHz.

For systems not eliminated as potential sources or victims of interference during the analysis, the contractor will conduct a more detailed analysis using techniques to predict on-tune undesired power levels considering the effects of transmitter power levels, harmonic levels, additional filtering in the transmit path, receiver antenna gain, etc. 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 specific modulation types involved in interference interactions. The analysis will include recommended techniques to mitigate any potential EMI issues that are identified during the analysis.

Deliverables: Two Results Memorandums  
Two DSO CRs

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

Performance Standard	Acceptable Quality Level (AQL)	Method of Surveillance
Task 6.1 – Results Memorandums, CRs	<p><b>Technical Requirements:</b> Percentage of technical requirements contained in the PWS that were met by the contractor. In addition, the deliverables 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, reports 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 reports. Material in the reports must be presented in a logical easy to read, and unambiguous manner. All relevant data must be included in the reports. Conclusions must be fully supported by data and information in the reports. The reports must be accurate. Reports should reflect innovative solutions or unique insights to resolve problems. Information and graphics must be presented in a pleasing and professional format.</p> <p>Reports must not require multiple returns to the contractor for editorial rework prior to being accepted by the DSO, user, or sponsor. Reports must be organized so that a typical reader can follow the flow of information in the report with figures and tables properly marked and easily read. The DSO approved report format should be used unless other provisions are stipulated at the beginning of the task. Minimal report rework post-delivery is an AQL.</p> <p><b>Schedule Requirement:</b> AQL is reports delivered on-time. The delivery date is the date the contractor provides the deliverables 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.

Score		Performance	Percent Fee	
Min	Max		Min	Max
1.00	1.49	Unsatisfactory	[redacted]	[redacted]
1.50	2.49	Marginal	[redacted] <i>8x</i>	[redacted] <i>8y</i>
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.

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.** 240 calendar days from the start of the TO.

As directed by the 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	Technical Approach Review (TAR)	MS PowerPoint presentation	15 days after TO award	Copy to COR	Once
6.1	Results Memorandums	MS Word	60 days after TO award	Copy to COR	Once
6.1	DSO CRs	Per DSO-HDBK-13-095	120 days after TO award	Standard distribution of final CRs**	Once

\*Calendar 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 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
001401	N/A	N/A	N/A	Government
001402	N/A	N/A	N/A	Government

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0014	POP 06-APR-2015 TO 05-JAN-2016	N/A	DISA JOINT SPECTRUM CENTER <i>BE</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>BE</i> FOB: Destination	H98294
001401	N/A	N/A	N/A	N/A
001402	N/A	N/A	N/A	N/A



Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 255020 DOSMC50091

AMOUNT: \$55,223.00

CIN DOSMC50091001401: ██████████ *Bx*

CIN DOSMC50091001402: ██████████ *Bx*

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer

Name: *Bx*

Organization/Office Symbol: PL63

Phone No.: *Bx*

E-Mail Address: *Bx*

Contract Specialist

Name: *Bx*

Organization/Office Symbol: PL63

Phone No.: *Bx*

E-Mail Address: *Bx*

Customer/COR/TM Point of Contact

Name: *Bx*

Organization/Office Symbol: Defense Spectrum Organization/JSC/OS351

Phone No.: *Bx*

E-Mail Address: *Bx*

Contractor Point of Contact

Contractor Legal Business Name: ITT

DUNS: 083655498

CAGE CODE: 9M715

Contractor POC:

Anne Hasselbrack

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

Phone Number: 301.867.2985

Technical POC:

Michael Hayes

E-mail: [Michael.hayes@exelisinc.com](mailto:Michael.hayes@exelisinc.com)

Phone Number: 301.867.2956

(End of clause)

Section I - Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

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).  
Invoice.

(2) Inspection/acceptance location. The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.  
Not applicable.

(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	_____
Mark For Code	_____
Service Approver (DoDAAC)	H98294
Service Acceptor (DoDAAC)	H98294
Accept at Other DoDAAC	_____
LPO DoDAAC	_____
DCAA Auditor DoDAAC	_____
Other DoDAAC(s)	_____

(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.

Name: *BK*  
 E-mail:

(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.

# ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT NUMBER (OR ORDER NUMBER) <b>1C1047 07 D0001</b>	2. DELIVERY ORDER CALL NO. <b>0000</b>	3. DATE OF ORDER/CALC. (YYYYMMDD) <b>2015 Apr 01</b>	4. QUANTITY/UNIT OF MEASURE <b>00000000</b>	5. PRIORITY
6. ISSUED BY DESAFB3 P.O. BOX 570 FORT MEADE MD 20755 0570	7. ADMINISTERED BY (if other than 6) <div style="text-align: center; font-weight: bold; font-size: 1.2em;">SEE ITEM 6</div>	8. DELIVERY FOR <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER (See Schedule if other)		

9. CONTRACTOR NAME: <b>EXELIS INC.</b> ANNE HASSELEBRACK AND 12925 WOODLAWN BL. LOR 51E 700 ADDRESS: <b>HERFORD VA 20710-6008</b>	10. DELIVERY METHOD (SEE SCHEDULE) (SEE SCHEDULE) <b>SEE SCHEDULE</b>	11. MARK FOR BUSINESS <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> SMALL BUSINESS
---	---	--

14. SHIP TO 2104 TURTLE LANDING ANNA CLIS MD 21407 6004	15. PAYMENT WILL BE MADE BY DEASCOLIAG ATTN: CAPS/CORP? P.O. BOX 38016 COLUMBIA CT 06306-0016	17. MAIL INSTRUCTIONS See Item 15
---	---	--------------------------------------

16. TYPE OF ORDER (SEE SCHEDULE)	17. DELIVERY METHOD (SEE SCHEDULE)	18. X (SEE SCHEDULE)	Has delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above mail and contract. Indicate you quote dated _____ Furnish the following information (if applicable):
-------------------------------------	---------------------------------------	-------------------------	--

ACCEPTANCE: THE CONTRACTOR HEREBY ACCEPTS THE ORDER SUBJECT TO THE NUMBERED PURCHASE ORDER AS IT MAY BE MODIFIED. THE CONTRACTOR HAS READ AND UNDERSTANDS THE TERMS AND CONDITIONS OF THE ORDER AND AGREES TO THE SAME.

NAME OF CONTRACTOR	SIGNATURE	TYPE, NAME AND TITLE	DATE SIGNED (YYYYMMDD)
--------------------	-----------	----------------------	------------------------

If this tax is marked together must sign Acceptance and return the following number of copies

17. ACCOUNTING AND APPROPRIATION DATA LOCAL USE:  
 See Schedule

18. ITEM NO.	19. QUANTITY AND UNIT OF MEASURE	20. QUANTITY ORDERED	21. UNIT PRICE	22. UNIT PRICE	23. AMOUNT
SEE SCHEDULE					

\* If quantity requested by the Government is accepted, quantity ordered includes by X. If different order include quantity accepted below quantity ordered and received.

25. TOTAL	932500
26. (SEE SCHEDULE)	

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	d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
--	---------	---

e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	28. SHIP NO.	29. CHECK NUMBER	30. INITIALS
--	--------------	------------------	--------------

31. PARTIAL	32. PAID BY	33. AMOUNT VERIFIED CONTRACTOR
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36. I certify this account is correct and proper for payment.

a. DATE	b. SIGNATURE AND TITLE OF CERTIFYING OFFICER
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37. RECEIVED AT	38. RECEIVED BY	39. DATE RECEIVED	40. TOTAL CONTAINERS	41. SR ACCOUNT NO.	42. SR CHECK NO.
-----------------	-----------------	-------------------	----------------------	--------------------	------------------

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013		1	Each	\$63,245.00	\$63,245.00

EXERCISED  
OPTION

ATT Ft Polk Option Year 6  
FFP

Electromagnetic Spectrum Engineering/E3 Analysis and support as specified in the Performance Work Statement (T3788). The contractor's proposal titled "AT&T on Fort Polk E3 Analysis Support" dated 5 November 2014 is incorporated by reference.

Period of Performance: March 31, 2015 through November 30 2015

FOB: Destination

PURCHASE REQUEST NUMBER: DOSMC50082

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NET AMT

\$63,245.00

ACRN AA

CIN: DOSMC500820001

\$63,245.00

Section C - Descriptions and Specifications

PERFORMANCE WORK STATEMENT

PERFORMANCE WORK STATEMENT  
(PWS) SPONSOR PROGRAM  
as of 15/Oct/2014

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3788
Task Order Number:	

Type of Task Order	Cost Plus Incentive Fee	(Check one box) (Double click on a box to check it.)
	Firm Fixed Price	
Key Words	AT&T, Fort Polk, E3 Analysis, RADHAZ, CTS, AWS, PCS, LTE, WCS, MSP	
SPONSOR		
AT&T 3300 W. Esplanade Ave. Suite 400 Metairie, LA 70002		

1. Contracting Officer's Representative (COR).

a. Primary COR.

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

b. Alternate COR.

Name:	<i>BC</i>
Organization:	Joint Spectrum Center (JSC)/J8
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>

2. Task Order (TO) Title. AT&T on Fort Polk 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

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Enclosure 4a,  
PWS  
Page 1 of 4 Pages  
20Mar2014/Version 3

Intelligence (ASD C31)] 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.

AT&T, hereafter referred to as the purchaser, has requested permission to install and operate a Cellular Telephone System (CTS), a Personal Communications Service (PCS) system, a Long Term Evolution (LTE) system, an Advanced Wireless Services (AWS) system, and a Wireless Communications Service (WCS) system on two sites at Fort Polk.

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, PCS, WCS, 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

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<sup>1</sup> Anthony M. Valletta, OASD (C31) 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.

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Enclosure 4a, PWS  
Page 2 of 4 Pages  
20Mar2014/Version 3

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.

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Enclosure 4a, PWS  
Page 3 of 4 Pages  
20Mar2014/Version 3

11. Delivery Schedule.

Schedule of Tasks and Deliverables	
Title	Schedule of Deliverables
Results Memorandum	18 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.

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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 01-APR-2015 TO 30-NOV-2015	N/A	DISA JOINT SPECTRUM CENTER <i>86</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>86</i> FOB: Destination	H98294

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50082  
AMOUNT: \$63,245.00  
CIN DOSMC500820001: \$63,245.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

252.201-7000 Contracting Officer's Representative DEC 1991

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer

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

Contract Specialist

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

Customer/COR/TM Point of Contact

Name: *BC*  
Organization/Office Symbol: Defense Spectrum Organization JSC/OS35  
Phone No.: *BC*  
E-Mail Address: *BC*

Contractor Point of Contact

Contractor Legal Business Name: Exelis, Inc.  
DUNS: 083655498  
CAGE CODE: 9M715  
Contractor POC: Anne Hasselbrack  
E-Mail Address: [anne.hasselbrack@exelisinccom](mailto:anne.hasselbrack@exelisinccom)  
Phone Number: 301.867.2985  
Fax Number:

(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).

**2 n 1**

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

**Not Applicable**

(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

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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.

NAME: '

EMAIL

*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.

Not Applicable

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

(End of clause)



# ORDER FOR SUPPLIES OR SERVICES

1. CONTRACT NUMBER A000000000 1C1047 07 D0001	2. DELIVERY ORDER CALL NO 0931	3. DATE OF ORDER CALL (YYYYMMDD) 2015 Apr 01	4. FPO/PERT/IS/QUEST NO DXXXXXX	5. PRIORITY
6. ISSUED BY DISA/IG P.O. BOX 540 FORT MEADE MD 20715 0540		7. ADMINISTERED BY (if other than 6) <b>SEE ITEM 6</b>		8. DELIVERY POINT <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER <small>(See Schedule if other)</small>

9. CONTRACTOR NAME: <b>EXELIS INC.</b> ANNIE HASSLEBACH AND 12975 VICKI LUGAR DR SILE 700 ADDRESS: HANNOX VA 20710 4008	10. (SEE SCHEDULE) 11. MARK IF RETURNED: <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISCONTINUED <input type="checkbox"/> RETURNED	12. MAIL INSTRUCTIONS See Item 15
--	---	--------------------------------------

14. SHIP TO 2804 TURBO LANDING ANNAPOLIS MD 21402 6004	15. PAYMENT WILL BE MADE BY DFAS/COJAO ATTN: CAPS/CRP? P.O. BOX 38016 COLUMBUS OH 43238-0016	<b>MARK ALL PACKAGES AND PAPERS WITH NUMBER AND SERIAL NUMBER IN BLOCKS 1 AND 2.</b>
--	--	--

16. TYPE OF ORDER	DELIVERY CALL	X	This delivery order shall be issued on another (Government agency or in accordance with and subject to terms and conditions of show: material contract. Indicate your quote date: Furnish the following on form specified herein: (4)
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ACCEPTANCE OF THIS CONTRACT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DELIVERY OF THE SUPPLIES OR SERVICES TO THE LOCATION SPECIFIED IN THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DELIVERY OF THE SUPPLIES OR SERVICES TO THE LOCATION SPECIFIED IN THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DELIVERY OF THE SUPPLIES OR SERVICES TO THE LOCATION SPECIFIED IN THE CONTRACT.

NAME OF CONTRACTOR	SIGNATURE	TITLE NAME AND TITLE
--------------------	-----------	----------------------

If this tax-exempt supplier must sign Acceptance and return the following number of copies:  
17. ACCEPTANCE AND APPROPRIATION DATA FORM, USG.

See Schedule

18. ITEM NO	19. SCHEDULE FOR DELIVERY SERVICES	20. QUANTITY (SEE SCHEDULE)	21. UNIT PRICE	22. EXTENDED PRICE	23. AMOUNT
<b>SEE SCHEDULE</b>					

24. QUANTITY IN COLUMN 20 HAS BEEN	25. TOTAL
<input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED	86

1. SIGNATURE OF AUTHORIZED REPRESENTATIVE	c. DATE	d. PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE
---	---------	--

28. SHIP TO	29. CON REFERENCE	30. INITIALS
<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	32. PAID BY	33. AMOUNT VERIFIED FOR CHECK
31. PAYMENT		
<input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	34. CHECK NUMBER	35. BILL OF LADING NO.
37. RECEIVED AT	38. RECEIVED BY	39. DATE RECEIVED (YYYYMMDD)
40. TOTAL CONTAINERS	41. SR ACCOUNT NO.	42. SR CHECK NO.

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013 EXERCISED OPTION	T-Mobile Tyndall AFB Option Year 6 FFP Electromagnetic Spectrum Engineering/E3 Analysis and support as specified in the Performance Work Statement (T3790). The contractor's proposal titled "New Cingular Wireless on Fort Campbell E3 Analysis Support" dated 3 December 2014 is incorporated by reference.	1	Each	\$17,956.00	\$17,956.00
<p>Period of Performance: March 31, 2015 through November 30 2015</p> <p>FOB: Destination</p> <p>PURCHASE REQUEST NUMBER: DOSMC50083</p>					
				NET AMT	\$17,956.00
ACRN AA CIN: DOSMC500830013					\$17,956.00

Section C - Descriptions and Specifications

PERFORMANCE WORK STATEMENT

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

Contract Number:	HC1047-07-D-0001
JSC Tracking Number:	T3790
Task Order Number:	

Type of Task Order	Cost Plus Incentive Fee	(Check one box) (Double click on a box to check it.)
	Firm Fixed Price	
Key Words	T-Mobile, Tyndall AFB, E3 Analysis, RADHAZ, AWS, MW, MSP	
SPONSOR		
T-Mobile USA, Inc. 7025 AC Skinner Pkwy Jacksonville, FL 32256		

1. Contracting Officer's Representative (COR).

a. Primary COR.

Name:	<i>BK</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>BK</i>
Fax Number:	(410) 293-9268
E-Mail Address:	

b. Alternate COR.

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

2. Task Order (TO) Title. T-Mobile on Tyndall 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>

<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.

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Enclosure 4a, PWS  
Page 1 of 4 Pages  
20Mar2014/Version 3

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.

T-Mobile, hereafter referred to as the purchaser, has requested permission to install and operate an Advanced Wireless Services (AWS) and a Microwave (MW) system on Tyndall AFB, FL.

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 AWS base station transmit frequency band and within  $\pm 10$  MHz of the MW transmit frequency) 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 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

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Enclosure 4a, PWS  
Page 2 of 4 Pages  
20Mar2014/Version 3

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

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Enclosure 4a, PWS  
Page 3 of 4 Pages  
20Mar2014/Version 3

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.

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Enclosure 4a,  
PWS  
Page 4 of 4 Pages  
20Mar2014/Version 3

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 01-APR-2015 TO 30-NOV-2015	N/A	DISA JOINT SPECTRUM CENTER <i>86</i> 2104 TURBOT LANDING ANNAPOLIS MD 21402-5064 <i>86</i> FOB: Destination	H98294

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930.5F20 000 C1013 0 068142 2F 257020 DOSMC50083  
AMOUNT: \$17,956.00  
CIN DOSMC500830013: \$17,956.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

252.201-7000 Contracting Officer's Representative

DEC 1991

CLAUSES INCORPORATED BY FULL TEXT

52.204-9000 Points of Contact (AUG 2005)

Contracting Officer

Name: *EC*  
Organization/Office Symbol: DISA/PI 63  
Phone No.: *EC*  
E-Mail Address: *EC*

Contract Specialist

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

Customer/COR/TM Point of Contact

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

Contractor Point of Contact

Contractor Legal Business Name: Exelis, Inc.  
DUNS: 083655498  
CAGE CODE: 9M715  
Contractor POC: Anne Hasselbrack  
E-Mail Address: anne.hasselbrack@exelisinc.com  
Phone Number: 301.867.2985  
Fax Number:

(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).

**2 n 1**

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

**Not Applicable**

(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.

NAME:

EMAIL

*BE*

(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.

**Not Applicable**

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

(End of clause)