ORDER FOR SUPPLIES OR SERVICES (FINAL)

1. CONTRACT NO.	2. DELIVERY ORDER NO.	3. EFFECTIVE DATE	4. PURCH REQUEST NO.	5. PRIORITY
N00178-15-D-8169	FF01	2015 Dec 18	75-002C-15	DO-C9

6. ISSUED BY CODE N00173
Naval Research Laboratory
4555 Overlook Ave., SW
Washington DC 20375
[redacted]

7. ADMINISTERED BY CODE S0507A
DCMA Lathrop
P.O. BOX 232, 700 EAST ROTH ROAD, BLDG. 330 (LATHROP, CA)
FRENCH CAMP CA 95231-0232

8. DELIVERY FOB
- [ ] DESTINATION
- [ ] OTHER
- [ ] *(See Schedule if other)*

9. CONTRACTOR CODE 1UQN7 FACILITY
DeVine Consulting, Inc.
39300 Civic Center Dr, Suite 130
Fremont CA 94538-9989

10. DELIVER TO FOB POINT BY *(Date)*
See Schedule

11. X IF BUSINESS IS
- [X] SMALL
- [X] SMALL DISADVANTAGED
- [ ] WOMEN-OWNED

12. DISCOUNT TERMS
Net 30 Days
WIDE AREA WORK FLOW

13. MAIL INVOICES TO THE ADDRESS IN BLOCK
See Section G

14. SHIP TO CODE
See Section D

15. PAYMENT WILL BE MADE BY CODE HQ0339
DFAS Columbus Center, West Entitlement
P.O. Box 182381
Columbus OH 43218-2381

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

16. TYPE OF ORDER
- [X] DELIVERY/CALL — This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of numbered contract.
- [ ] PURCHASE — Reference your _____ furnish the following on terms specified herein.

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)*
DeVine Consulting, Inc.		Jeffrey Managing Partner	

- [ ] 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				

**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
BY: /s/[redacted] 12/18/2015
CONTRACTING/ORDERING OFFICER

25. TOTAL $1,734,376.00

26. DIFFERENCES

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. D.O. VOUCHER NO.	30. INITIALS
	[ ] PARTIAL [ ] FINAL	32. PAID BY	33. AMOUNT VERIFIED CORRECT FOR

f. TELEPHONE	g. E-MAIL ADDRESS	31. PAYMENT	34. CHECK NUMBER
		[ ] COMPLETE [ ] PARTIAL [ ] FULL	

36. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT.

a. DATE	b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	35. BILL OF LADING NO.

37. RECEIVED AT	38. RECEIVED BY *(Print)*	39. DATE RECEIVED	40. TOTAL CON-TAINERS	41. S/R ACCOUNT NUMBER	42. S/R VOUCHER NO.

SECTION B SUPPLIES OR SERVICES AND PRICES

CLIN - SUPPLIES OR SERVICES

For Cost Type Items:

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
7000	AJ22	Atmospheric Information Technology and Research and Development -- The Contractor shall furnish necessary personnel to perform efforts as described in Section C and provide reports and data in accordance with Exhibit A. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	[redacted]	[redacted]	$1,729,876.00
700001	AJ22	(RDT&E)					

For Cost Type / NSP Items

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
7001		Data in accordance with Exhibit A (DD Form 1423)	[redacted]	[redacted]			NSP

For Cost Type Items:

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
7100	AJ22	Atmospheric Information Technology and Research and Development -- The Contractor shall furnish necessary personnel to perform efforts as described in Section C and provide reports and data in accordance with Exhibit A. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	[redacted]	[redacted]	$1,755,824.00
		Option					
7200	AJ22	Atmospheric Information Technology and Research and Development -- The Contractor shall furnish necessary personnel to perform efforts as described in Section C and provide reports and data in accordance with Exhibit A. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	[redacted]	[redacted]	$1,782,162.00
		Option					
7300	AJ22	Atmospheric Information Technology and Research and Development -- The Contractor shall furnish necessary personnel to perform efforts as described in Section C and provide reports and data in accordance with	[redacted]	[redacted]	[redacted]	[redacted]	$1,808,894.00

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost	Fixed Fee	CPFF
		Exhibit A. PSC: AJ22 (RDT&E)					
		Option					
7400	AJ22	Atmospheric Information Technology and Research and Development -- The Contractor shall furnish necessary personnel to perform efforts as described in Section C and provide reports and data in accordance with Exhibit A. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	[redacted]	[redacted]	$1,836,027.00
		Option					

For ODC Items:

Item	PSC	Supplies/Services	Qty	Unit	Est. Cost
9000	AJ22	Material and Travel in support of CLIN 7000. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	$4,500.00
9100	AJ22	Material and Travel in support of CLIN 7100. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	$4,500.00
		Option			
9200	AJ22	Material and Travel in support of CLIN 7200. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	$4,500.00
		Option			
9300	AJ22	Material and Travel in support of CLIN 7300. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	$4,500.00
		Option			
9400	AJ22	Material and Travel in support of CLIN 7400. PSC: AJ22 (RDT&E)	[redacted]	[redacted]	$4,500.00
		Option			

SECTION C DESCRIPTIONS AND SPECIFICATIONS

Statement of Work (SOW)

Atmospheric Information Technology and Research and Development

Introduction:

This Statement of Work (SOW) describes the Research and Development (R&D) for the Naval Research Laboratory (NRL) Marine Meteorology Division (MMD). MMD is responsible for conducting a broadly based multidisciplinary program of scientific research and advanced technological development directed toward environment information superiority for the Navy/Marine Corps and DoD. MMD plans and executes a broad-spectrum S&T research and RDT&E programs designed to:

1) Improve the understanding of atmospheric processes and air-sea-ice-land-space interactions that impact fleet operation;

2) Develop and transition environmental products and software systems that analyze, simulate, and predict the structure and behavior of these processes; and

3) Assess environmental impacts on weapons systems and decision aids.

Mission:

NRL MMD focuses on basic research and scientific and technological development related to the analysis and prediction of atmospheric processes that impact fleet operations and mission planning. Particular emphasis is placed on the investigation and quantitative description of dynamics and physics of the lower atmosphere and air-sea-land interface, on scales that range from the turbulence scale to the scale of planetary weather systems. Numerical data assimilation and prediction systems are developed to optimally estimate the three- dimensional state of the global and regional mesoscale atmosphere in real-time through assimilation of a variety of in situ and remotely sensed observations (e.g. satellite, radar); and to integrate these analyses forward in time through the use of sophisticated numerical models. These multi-scale prediction systems are transitioned for operational use in providing a broad range of environmental guidance to the fleet. NRL MMD conducts leading-edge science and technology (S&T) efforts in the science of prediction for the atmosphere and the battlespace environment, develop numerical tools for generating user-relevant probabilistic products, transition these tools to operations, and advocate the research and exploitation of probabilistic prediction. NRL MMD also develops on-demand weather impact information systems and supports naval missions in a variety of warfare areas, most notably strike, marine and special operations, and chemical- biological warfare.

Background:

The research addresses the underlying dynamical and physical mechanisms that lead to observed atmospheric structures, and develops quantitative data fusion and display products, data assimilation systems and models, including coupled air-ocean-ice-land-space models, that allow the accurate numerical analysis and prediction of atmospheric impact on sensor performance at tactical scale. A broad range of scientific and technical resources are necessary components of marine meteorology research and development, including field programs and experiments, advanced numerical techniques, sophisticated physics, large real-time remote sensing and in-situ observational databases, software engineering, high-performance computing, and applications support. NRL MMD Science and Technology (S&T) research and advanced “Research and Development, Testing and Evaluation” (RDT&E) programs are highly focused on operational applications, and the research is closely coordinated with resource sponsors, Navy customers, and the national weather prediction community to ensure active collaboration and achieve economies of scale in meeting Navy requirements for environmental weather support.

Objective:

The main objective of this SOW is to seek classified support to the Naval Research Laboratory (NRL) Marine Meteorology Division (MMD) research and transition activities. NRL MMD focuses its research on

1) the basic understanding of the behavior of the atmosphere and its constituents on local, regional, and global scales, including its interaction with the ocean, land, ice, and middle atmosphere;

2) the invention, prototype, and development of new capabilities and systems for objective environmental analysis and prediction;

3) the integration of the new Numerical Weather Prediction (NWP) capabilities (e.g., software, systems integration, and high performance computing) with automated systems for assessing risk and analyzing impact of atmospheric conditions on Navy/DoD operations and weapons system performance.

From time to time, NRL MMD needs additional support to accelerate its research or specific support to complement the research and transitions. The research support needed include both the S&T research and RDT&E activities in both the NWP system development and the atmospheric science applications. The proposed research addresses new efforts in the areas of evolving science, technology, research, development, and testing. We are seeking a multi-year, multi-faceted program that will support NRL’s ongoing requirements in the following areas:

· Conventional and satellite data assimilation, and electromagnetic wave propagation advancements (e.g., high performance computing),

· Global and mesoscale NWP model developments (e.g., program infrastructure, software, and systems testing),

· Tactical scale nowcasting capability development, and

· NWP product applications and visualization (e.g., systems integration and software).

The general objective of this SOW is to provide research and transition support extending from basic research through applied research to fleet applications work, software applications and infrastructure, utilizing both current and future generations of NWP global and mesoscale models.

Statement of Work

Task 1: Electromagnetic Wave Propagation Research and Development to assist NRL in reaching its forecasting objectives.

The NRL has interest in high fidelity prediction of electromagnetic wave propagation from surface ships to support radar, electronic warfare, and communications system operation. This task objective is to define and develop a concept by which high fidelity knowledge of the shipboard electromagnetic wave propagation environment can be predicted. Anomalous propagation that varies both spatially and temporally is common due to trapping of energy caused by refractive gradients in the lower atmosphere causing an effect known as ducting. Currently, the fidelity of programs such as the Advanced Refractive Effects Prediction System is limited by the fidelity of the refractive profile information fed to it. The research will investigate technologies that would enable high fidelity measurement or prediction of refractive profiles. This research can be conducted using Numerical Weather Prediction (NWP) systems such as the Coupled Ocean/Atmosphere Mesoscale Prediction System (COAMPS®[1]). The enhancement of numerical weather prediction systems is developed to provide accurate mesoscale analyses and forecasts of microwave refractivity and to provide a “test bed” for the application of an on-scene prediction of electromagnetic wave propagation.

Previous studies demonstrated better model performance with a horizontal resolution of 4 km or finer. One of the challenges of using finer vertical and horizontal resolutions is that the appropriate time step to satisfy the Courant-Friedrichs-Lewy (CFL) condition is very small. The smaller the increments in which the NWP model progress in time, the higher the computational cost. In addition, due to the limitations of the some NWP models, the output usually needs to be interpolated to satisfy the high vertical resolution needed (finer than 60 m) to construct high fidelity refractive profiles and account for instabilities between the layers that can affect the water vapor distribution. Therefore, there is still a need for improvement and development of low-cost, high performance NWP techniques.

Task 1.1 Perform configuration tests to identify COAMPS optimal vertical resolution for EM propagation applications.

Test and evaluate different vertical resolutions NWP systems (e.g., COAMPS) to investigate and define the optimal vertical configuration to run simulations (forecasts) that will serve as input to enable the construction of high fidelity refractive profiles.

Test and evaluate initial conditions. Comparison of the sources for initial conditions (e.g., global and mesoscale analysis fields) will be conducted to identify the optimal initialization fields. The output product shall enable the identification of the moisture content of the environment, pressure gradients, and temperature gradients, with primary focus on identifying temperature inversions in the atmosphere.

Perform interpolation methods and software modifications to use NWP systems to achieve the high vertical resolution required for the refractive profiles.

Task 1.2 Perform interpolation methods and use COAMPS-Large Eddy Simulation (COAMPS–LES) to achieve the high vertical resolution required for the refractive profiles.

Due to the limitations of the model, the output will be interpolated to use COAMPS-LES to satisfy the high vertical resolution needed (finer than 60 m) to construct high fidelity refractive profiles and account for instabilities between the layers that can affect the water vapor distribution.

Task 1.3 Perform validation and performance analyses.

Analyzes for validation of the meteorological parameters (e.g., relative humidity, mixing ratio, temperature, pressure, wind direction, and wind speed) will be performed to ensure the quality of the output that will be used to create the refractive profile. The contractor will identify and quantify any computing inaccuracies due to the interpolation method.

In addition, the performance of the model will be analyzed to identify the configuration with the smallest computing cost.

Task 1.4 Perform Refractive Index Research and Development

Investigate and develop methods to optimize the prediction of electromagnetic wave propagation. Investigate the current system used to develop the refractive profiles and will optimize as needed. This could include modifications to the code of the model, modifications to the output data (post processing adjustments), and modifications to the systems that will use the refractive profiles as input.

Compute from forecasted COAMPS output fields for region of choice and conduct validation test. Use the validation results as an indicator to modify the COAMPS physics for the purpose of improving Refractive Index output.

Task 1.5 Implement the use of a shipboard system that will allow electromagnetic wave signals of opportunity to be used to characterize the environment and use this analysis for the next COAMPS assimilation cycle for validation of the forecast previously obtained.

The process as a whole should be complex enough to obtain high fidelity profiles, but simple enough to implement in shipboard systems. However, the shipboard system will likely not receive the complete observations. Extensive testing should be carried out to account for all possible data dropout scenarios.

Task 1.6 Transition developed electromagnet prediction capabilities to operations.

The final step of many R&D programs is to implement the capability and databases into operations, including configuration management, development of manuals and documentation, development of training material, and technical support for operational tests and evaluations.

Task 2: Satellite Radiance Calibration and Validation

This task involves with Defense Meteorological Satellite Program (DMSP) satellite calibration and validation. This task will perform research along the nationally recognized NRL DMSP experts in microwave remote sensing hardware, software and environmental retrieval algorithms in conjunction with extensive NRL data assimilation analysis programs, sensor models and data bases to conduct comprehensive calibration and validation of SSMIS instruments: (1) detect and correct sensor geolocation and beam pointing errors, (2) calibrate SSMIS sensor data records (SDRs), (3) validate environmental data records (EDRs) and (4) provide instrument performance monitoring and quality control of current operational Navy SSMIS (F-16, F-17, F-18, and F19) sensor and environmental data products.

Task 2.1 DMSP Instrument Calibration

Conduct analysis of early orbit modes for instrument functionality, sensor health, calibration, stability and Field of View (FOV) and operation of the ground processing software.

Conduct comprehensive geo-location error analysis. If needed, generate calibration coefficients to bring antenna pointing accuracy within specification.

Conduct extensive scan uniformity error analysis to determine potential along-scan bias errors. If needed, generate calibration coefficients to bring the non-uniformity within the radiometer calibration error specification.

Complete the inter-sensor comparisons of SSMIS sensor products. If needed, generate sensor coefficients to bring the residual SSMIS calibration errors within specification.

Complete comparisons and analyze departures of the observed SSMIS brightness temperatures (OB) with those computed using both NOGAPS and ECMWF NWP model background fields (BK) and a radiative transfer model. The OB-BK departures when used with Orbital Display tools such as the DGS package (Werner, Aerospace) have proven to provide valuable insight to the physical processes causing the anomalies If necessary, develop physically based mitigation procedures to correct the observed biases.

Task 2.2 SSM/I Sensor Quality Control and Long Term Sensor Health Monitoring Systems

Monitor and evaluate current operational F-16, F-17, F-18, and F19 SSMIS instruments for quality radiometric performance and environmental data products. Perform analysis to assess the urgency and significance of an emerging sensor anomaly, and based upon the anomaly assessment, report to FNMOC/CNMOC and DMSP SPO with a plan of attack for anomaly mitigation. Maintain continuous near real-time monitoring of the OB-BK departures. Continue generation of library of all SSM/I and SSMIS data products. Investigate and assess sensor anomalies as they occur. If needed upgrade Ground Data Processing Software to address sensor problems should they occur. Depending upon the anomaly assessment,

additional OM&N funds may be required.

Task 2.3 SSMIS Ground Processing Software Maintenance and Upgrade Support

Perform initial pre-OPS check out of the latest SSMIS Ground Processing Software (GPS) as delivered from Northrop-Grumman via the DMSP SPO. Maintain the capability to process the entire SSMIS data stream from incoming Raw Data Records (RDRs) to producing TDRs, SDR, ENV, LAS and UAS output files. Maintain in-house expertise to perform this function. Test newly developed calibration and/or environmental retrieval algorithms and mitigation strategies. Perform post-mortem analysis of SSMIS GPS crashes at FNMOC, assess root cause and report back to FNMOC on significance and mitigation strategy. Depending upon the severity of crash, escalate to DMSP SPO for further guidance.

Task 2.4 EDR Validation

The instrument calibration results will help establish which SSMIS imaging EDRs require detailed validation, with the scope and level of effort determined at that time. The total budget allocation for validation of all imaging EDRs is noted below. The imaging EDRs consist of: Ocean Surface Wind Speed, Rain Flag and Rain Rate, Total Precipitable Water, Cloud Liquid Water, Sea Ice Edge, Concentration and Age, Soil Moisture, Surface Temperature and Type, Snow Cover Depth, Water Equivalent and Edge.

Conduct a comprehensive validation of SSMIS lower-air sounding EDRs.

Conduct a comprehensive validation of SSMIS upper-air sounding EDRs as described in Section 7.0 of the SSMIS Cal/Val Plan.

Task 2.5 Algorithm Improvement

If needed, minor EDR retrieval algorithm deficiencies will be addressed and documented in the final Cal/Val Report. Typical deficiencies include minor tuning of algorithm coefficients and simple changes to the structure of the algorithm. A nominal budget is allocated for these efforts as part of the GPS maintenance and upgrade support task.

If unforeseen major algorithm problems occur, a set of recommendations will be developed by the Cal/Val team to address the deficiencies along with budget information and schedule to complete. For example, if the SDR algorithms need to be modified to account for calibration errors or if the EDR algorithms do not meet specification the team will develop new algorithms to address these problems.

Task 2.6 Transition developed satellite capabilities to operations.

The final step of many R&D programs is to implement the capability and databases into operations, including configuration management, development of manuals and documentation, development of training material, and technical support for operational tests and evaluations.

Task 3: Seasonal and Ensemble Research and Development

Task 3.1 Diagnostic Tools

Develop diagnostic software to better analyze ensemble predictions in terms of regions and synoptic situations, and through energy budget, vorticity budget and spectrum analysis.

This will also require re-writing existing diagnostic code in a common language for computation and display.

Task 3.2 Seasonal Global NWP Prediction and Ensemble Seasonal Prediction

Perform extended integrations for the Navy global models using different configurations to evaluate and understand the potential for predictability on monthly time scales for the global Seasonal Prediction.

Evaluate NAVGEM for monthly time scales at highest resolution possible, and at resolutions considered operationally feasible.

Perform ensemble seasonal prediction evaluation with various configurations.

Enhance the EPS performance by increasing the resolution of the system, multiple physics package, and perturbation of physical parameters.

Task 3.3 Madden Julian Oscillation (MJO)

Examine metrics of specific high interest to the Navy, such as frequency of occurrence of high-speed near surface winds, and larger-scale phenomenon, such as the Madden Julian Oscillation (MJO).

Investigate and evaluate the representation of the MJO in NAVGEM. investigate the mechanism controlling MJO's occurrence and amount of convection.

Participate in the MJO Diabatic Heating Model Inter-comparison Project.

Conduct NAVGEM numerical experiments to simulate the MJO phenomena observed in the field experiments.

Task 3.4 Transition developed seasonal and ensemble prediction capabilities to operations.

The final step of many R&D programs is to implement the capability and databases into operations, including configuration management, development of manuals and documentation, development of training material, and technical support for operational tests and evaluations.

Task 4: Information Technology

NRL is participating in the Earth System Prediction Capability (ESPC) project. ESPC is an interagency collaboration between DoD (Navy, Air Force), NOAA, DoE, NASA, and NSF for coordination of research to operations for an earth system analysis and extended range prediction capability. This task involves with the information technology improvements for NRL researchers to use remote High

Performance Computing (HPC) centers with most efficiency.

Task 4.1 Flexible computing/network architecture to execute NWP programs at remote HPC centers.

Develop flexible computing/network architecture to execute NWP programs (e.g. global NWP models, mesoscale NWP models, and data assimilation systems) at remote HPC centers.

Task 4.2 Flexible best practice for real-time data transfer of the METOC observations, and post processing of data staging strategy.

Develop flexible best practice for real-time data transfer of the METOC observations, and post processing of data staging strategy. Maximize the HPC compute cycle to minimize wasted cycles or storage space.

Task 4.3 Operational Scenarios

Simulate operational scenarios of executing NWP models and data assimilation system at a remote HPC center. Simulate the data (input and output) transfers and data visualizations from a remote site.

Extend the CONOPS to coupled prediction system(s).

Develop executing strategy to migrate global model among various architectures.

Task 4.4 Transition developed Information Technology capabilities to operations.

The final step of many R&D programs is to implement the capability and databases into operations, including configuration management, development of manuals and documentation, development of training material, and technical support for operational tests and evaluations.

Security:

The following are required at the time of proposal submission:

-Contractor personnel who require NRL base access or access to NRL unclassified material and/or unclassified systems shall possess a favorably completed DoD National Agency Check with Law and Credit (NACLC);

- Contractor personnel who require access to Secret material must have, at a minimum, a favorably completed DoD National Agency Check with Law and Credit (NACLC) and final DoD granted Secret security clearance; and

- Contractor personnel who require access to Top Secret/SCI material must have, at a minimum, a favorably completed DoD National Agency Check with Law and Credit (NACLC) and final DoD granted Top Secret security clearance with the eligibility of SCI.

The Contractor shall ensure that all classified material is handled in accordance with the issued DD 254, the National Security Program Operating Manual (NISPOM) (DoD 5220.22M) and all NRL and applicable Security Program Guides/Directives.

All contractors (including subcontractors) identified in the Statement of Work shall supplement their current security practices by requiring any personnel involved in executing the contract to complete Government-sponsored and administered Operations Security (OPSEC) training, OPSE-1301.

Acronyms

BK	background fields
CAL/VAL	Calibration and Validation
CFL	Courant-Friedrichs-Lewy
COAMPS®	Coupled Ocean/Atmosphere Mesoscale Prediction System
DGS	DMSP Graphical Simulator
DMSP	Defense Meteorological Satellite Program
DoE	Department of Energy
ECMWF	European Center for Medium range Weather Forecasting
EDR	Environmental Data Records
EM/EO	Electromagnetic and Electro-optical
ENV	Environmental
EPS	Ensemble Prediction System
ESPC	Earth System Prediction Capability
FNMOC	Fleet Numerical Meteorology and Oceanography Center
FOV	Field of View
GPS	Ground Processing Software
HPC	High Performance Computing
LAS	Lower Atmospheric Sounding
LES	Large Eddy Simulation
METOC	Meteorology and Oceanography
MJO	Madden Julian Oscillation
MMD	Marine Meteorology Division
NASA	National Aeronautics and Space Administration
NAVGEM	Navy Global Environmental Model
NOAA	National Oceanic and Atmospheric Administration
NRL	Naval Research Laboratory
NRL	Naval Research Laboratory
NSF	National Science Foundation
NWP	Numerical Weather Prediction
OB	brightness temperatures DGS
R&D	Research and Development

S&T	Science and Technology
SDR	Sensor Data Records
SOW	Statement of Work
SPO	DMSP System Program Office
SSMI/S	Special Sensor Microwave Imager/Sounder
T&E	Test and Evaluation
TDR	Temperature Data Records
UAS	Upper Atmospheric Sounding

[1] COAMPS® is a registered trademark of the Naval Research Laboratory.

SECTION D PACKAGING AND MARKING

1.0 Packaging and marking shall be in accordance with Section D of the IDIQ Contract.

SECTION E INSPECTION AND ACCEPTANCE

1.0 Inspection and acceptance of the final delivery will be accomplished by the Contracting Officer Representative (COR) designated in Section G of this contract. Inspection and acceptance will be performed at the Naval Research Laboratory, Monterey, CA 93943.

2.0 INSPECTION AND ACCEPTANCE CLAUSES INCORPORATED BY REFERENCE

52.246-9 Inspection of Research and Development (Short Form) (APR 1984)

SECTION F DELIVERABLES OR PERFORMANCE

The periods of performance for the following Items are as follows:

7000	12/18/2015 - 12/17/2016
9000	12/18/2015 - 12/17/2016

1.0 CLIN - DELIVERIES OR PERFORMANCE

The periods of performance for the following Items are as follows:

7000	12/18/2015 - 12/17/2016
9000	12/18/2015 - 12/17/2016

The periods of performance for the following Option Items are as follows:

7100	12/18/2016 - 12/17/2017
7200	12/18/2017 - 12/17/2018
7300	12/18/2018 - 12/17/2019
7400	12/18/2019 - 12/17/2020
9100	12/18/2016 - 12/17/2017
9200	12/18/2017 - 12/17/2018
9300	12/18/2018 - 12/17/2019
9400	12/18/2019 - 12/17/2020

2.0 PLACE OF PERFORMANCE

Services to be performed hereunder will be provided at 7 Grace Hopper Ave, Monterey, CA 93943.

3.0 PLACE OF DELIVERY - FOB Destination

The contractor shall deliver supplies, all transportation charges paid, to destination in accordance with the clause in Section F of the Schedule titled FAR 52.247-34 FOB Destination (NOV 1991).

Receiving Officer
Naval Research Laboratory
Task Order Number: N00178-15-D-8169-FF01
ATTN: [redacted]
CODE: [redacted]
LOCATION: [redacted]
[redacted]

SECTION G CONTRACT ADMINISTRATION DATA

1.0 CONTRACT ADMINISTRATION

In order to expedite administration of this contract, the following delineation of duties is provided, including the names and contact information, for each individual or office specified. Contact the individual/position designated as having responsibility for any questions, clarifications or information regarding the functions assigned herein.

(a) The Administrative Contracting Officer (ACO), designated in Block 6 on the Standard Form 26, will expedite administration of the contract and direct inquiries to the appropriate office listed below.

(b) The Contract Administration Office (CAO) designated in Block 20A on the Standard Form 26 is responsible for all matters specified in FAR 42.302(a) and DFARS 242.302(a), except in those areas otherwise designated herein.

- Contract Specialist [redacted]
- Security Matters [redacted]
- Safety Matters [redacted]
- Patent Matters [redacted])
- Release of Data [redacted]

(c) Inquiries regarding payment should be referred to DFAS at http://www.dod.mil /dfas/contractorpay/myinvoice.html

2.0 CONTRACTING OFFICER'S REPRESENATIVE (COR) — FUNCTIONS AND LIMITATIONS

(a) [redacted] is hereby designated as the Contracting Officer's Representative (COR). Unless terminated sooner, this appointment is effective for the period of performance of this contract including any options, if exercised. COR authority may not be re-delegated. No change in COR assignment shall be made without written notice by the Contracting Officer, who will modify the contract to reflect the change of COR assignment. The Contracting Officer may designate assistant or alternate COR(s) to act for the COR by naming such assistant/alternate(s) in writing and transmitting a copy of such designation to the contractor via contract modification.

(b) The responsibilities and limitations of the COR are as follows:

(1) Providing technical direction and guidance as necessary with respect to the performance of work under this contract. Technical direction and guidance may be used to provide technical advice/recommendations/clarifications on the statement of work/specifications. It MAY NOT be used to tell the contractor how to perform the work.

(2) Submitting interim and final Contractor Performance Assessment Reports (CPARS) at www.cpars.csd.disa.mil/cparsmain.htm.

(3) Quality assurance of services performed or deliveries made

(4) Inspection and acceptance of services or deliverables

(5) Ensuring that Government Furnished Property, to include any contractor use of on-site

equipment and/or IT resources is adequately monitored and accounted for.

(6) Security requirements on Government installation, such as the request and retrieval of personnel security badges and vehicle passes.

(7) Monitoring contractor's performance and promptly report problems and recommendations for corrective action to the PCO

(8) Annually, furnish a written report on performance of the contractor to the PCO. And, if deemed necessary, attending a follow-up meeting to discuss.

(9) Attend post award conference, if conducted.

(10) Ensuring a copy of all Government technical correspondence, to include Technical Direction Memorandums/Guidance, is forwarded to the PCO for placement in the contract file.

(11) Monitoring of funds expended

(12) Ensuring that the Contractor

(13) does not exceed the defined statement of work set forth in the contract.

(c) Limitations: The COR is not authorized to take any action, either directly or indirectly, that could result in a change in the cost/price, quantity, quality, place of performance, delivery schedule, or any other terms or conditions of the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or the statement of work/specifications, a modification must be issued in writing and signed by the Contracting Officer in order to effect such changes. No such changes shall be made without the express written prior authorization/direction of the Contracting Officer.

3.0 252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)

(a) *Definitions.* As used in this clause—

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

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

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

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

(c) *WAWF access*. To access WAWF, the Contractor shall—

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

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

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

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

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

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

____Cost Voucher_____

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.

_____Inspection at Destination_____

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

ROUTING DATA TABLE*

Field Name in WAWF	Data to be entered in WAWF
Pay Official DoDAAC	HQ0339
Issue By DoDAAC	N00173
Admin DoDAAC	S0507A
Inspect By DoDAAC	N00173
Ship To Code	N00173 7500
Ship From Code	N/A
Mark For Code	N/A
Service Approver (DoDAAC)	N00173
Service Acceptor (DoDAAC)	N00173 7500
Accept at Other 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 e-mail address identified below in the

“Send Additional Email Notifications” field of WAWF once a document is submitted in the system.

[redacted]

(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.

[redacted]

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

(End of clause)

4.0 SUBCONTRACTORS/CONSULTANTS

(a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).

(b) Paragraph (j) of FAR 52.244-2 is filled in as follows. The following subcontractor/consultants have been identified in the Contractor’s proposal as necessary for performance of this contract and were evaluated during negotiations:

SUBCONTRACTOR/CONSULTANT NAME	ESTIMATED TOTAL COST
[redacted]	$869,492.00

5.0 INCREMENTAL FUNDING

Pursuant to the Limitation of Funds clause (FAR 52.232-22), the total amount allotted to this task order is $ .00. The amounts presently available and allotted to this task order for payment of cost and fixed fee and the period covered by these amounts for incrementally funded CLINs is set forth below:

CLIN	ALLOTTED TO COST	ALLOTED TO FEE	ESTIMATED PERIOD COVERED
7000	$46,296.30	[redacted]	12/18/15 - 1/17/16

6.0 INFORMATIONAL SUBLINE ITEMS

It is anticipated that the research and development services performed under this contract will be paid for from multiple sources of funds. Informational subline items will be established as necessary to identify each accounting citation classification.

7.0 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)

It is anticipated that the research and development services performed under this task order will be paid for from multiple sources of funds. Informational subline items will be established as necessary to identify each accounting citation classification.

In accordance with PGI 204.7108, clauses 252.204-0001 through 0011 are not applicable to this Task Order; therefore, use PGI 204.7108(d)(12) – "Other", and pay as follows: If there is more than one ACRN within a contract line item, the payment office will make payment using the ACRN(s) cited on the Awardee's invoice as it reflects the agency that is sponsoring the work. This is a Research & Development Task Order. One sponsor's funding cannot be used to fund another sponsor's project or progra m. The non-standard clause (d)(12) Other provides a significantly better reflection of how funds will be expended in support of Task Order performance.

8.0 TECHNICAL DIRECTION MEMORANDUM (TDM)

(a) For the purposes of this clause, technical direction includes the following:

(1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise describes work which will accomplish the objectives described in the statement of work;

(2) Guidelines to the Contractor, which assist in interpretation of drawings, specifications or technical portions of, work description.

(b) Technical instructions must be within the scope of work stated in the contract. Technical instructions may not be used to:

(1) Assign additional work under the contract:

(2) Direct a change as defined in the contract clause entitled "Changes";

(3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or

(4) Change any of the terms, conditions or specifications of the contract

(c) The TDM shall be written by the Contracting Officer's Representative (COR), with the original given to the Contractor and a copy retained in the CORs file. Technical direction may be issued orally only in emergency situations. If technical direction is issued orally, a TDM must follow within two (2) working days from the date of the oral direction. Amendments, corrections, or changes to TDMs shall also be in written format and shall include all the information set forth in paragraph (e) below.

(d) A TDM shall be considered issued when the Government deposits it in the mail, or if transmitted by other means, when it is physically delivered to the contractor.

(e) TDMs shall include, at a minimum, the following information:

(1) Date of TDM,

(2) Contract Number,

(3) Reference to the relevant portion or item in the Statement of Work,

(4) The specific technical direction or clarification,

(5) The type of work to be performed, i.e., (a) SETA support or (b) R&D work,

(6) A reference to the appropriate CLIN or SubCLIN,

(7) The anticipated level of effort, materials and travel expected as a result of the TDM,

(8) The JON, Program Element, and associated dollar amount, and

(9) The signature of the COR

(f) CORs shall provide a copy of each TDM with the necessary increment of funds to the Contracting Officer for retention in the official contract file. CORs shall retain all files containing TDMs for a period of two (2) years after the final contract completion date.

(g) The only individual authorized in any way to amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special clause, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after its receipt.

Accounting Data

SLINID	PR Number	Amount
700001	75-002C-15	50000.00

LLA :
AA 97X4930. NH4A 000 77777 0 000173 2F 000000 N00173Z45000

BASE Funding 50000.00
Cumulative Funding 50000.00

SECTION H SPECIAL CONTRACT REQUIREMENTS

1.0 CONTRACT TYPE

This is a Cost-Plus-Fixed-Fee Term task order.

2.0 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)

The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.

(b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least thirty (30) days in advance (sixty (60) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.

(c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.

(d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel:

LABOR CATEGORY	FIRST/M/LAST NAME
Program Manager	[redacted]
Senior Scientist	[redacted]
Senior Engineer	[redacted]

3.0 ONR 5252.235-9714 - REPORT PREPARATION (JUL 2005)

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-2005, Scientific and Technical Reports: Elements, Organization, and Design.

[NOTE: All NISO American National Standards are available as free, downloadable pdf(s) at http://www.niso.org /standards/index.html. NISO standards can also be purchased in hardcopy form from NISO Press Fulfillment, P. O. Box 451, Annapolis Junction, MD 20701-0451 USA. Telephone U.S. and Canada: (877) 736-6476; Outside the U.S. and Canada: 301-362-6904 fax: 301-206-9789.]

4.0 SPECIAL CONTRACT REQUIREMENT REGARDING NON-DISCLOSURE OF INFORMATION

Data includes all data, information and software, regardless of the medium (e.g. electronic or paper) and/or format in which the data exists, and includes data which is derived from, based on, incorporates, includes or refers to such

data. In the course of performing this Contract, the Contractor may be or may have been given access to: Source Selection Information [as defined in Federal Acquisition Regulation (FAR) 3.104]; data that has been assigned (or data that is generated by the Contractor that should be assigned) a contractually required or other Government distribution control (such as a Distribution Statement prescribed in DoD Directive 5230.24); and/or data that has been given a restrictive legend by the source of the data such as "business sensitive," "proprietary," "confidential," or word(s) with similar meaning that impose limits on the use and distribution of the data (see for example FAR 52.215-1(e)). All such data with limitations on use and distribution are collectively referred to herein as "protected data."

This Special Contract Requirement supplements and implements Defense FAR Supplement (DFARS) 252.204-7000, "DISCLOSURE OF INFORMATION." As a condition to receiving access to protected data, the Contractor shall: (1) prior to having access to protected data, obtain the agreement of the source of the protected data to permit access by the Contractor to such protected data; (2) use the protected data solely for the purpose of performing duties under this Contract unless otherwise permitted by the source of the protected data; (3) not disclose, release, reproduce or otherwise provide or make available the protected data, or any portion thereof, to any employee of the Contractor unless and until such employee has been informed of the restrictions on use and distribution of the protected data and agreed in writing to conform with the applicable restrictions; (4) not disclose, release, reproduce or otherwise provide or make available the protected data, or any portion thereof, to any non-Government person or entity (including, but not limited to, affiliates, subcontractors, successors and assignees of the Contractor), unless the Contracting Officer and the source of the protected data have given prior written approval (which shall be conditioned upon the person receiving the protected data having been informed of the restrictions on use and distribution of the protected data and having agreed in writing to conform with the applicable restrictions; (5) establish and execute safeguards to prevent the unauthorized use or distribution of protected data.

Any unauthorized use, disclosure or release of protected data may result in substantial criminal, civil and/or administrative penalties to the Contractor or to the individual who violates a restriction on use or distribution of protected data. Any agreement with another company regarding access to that company's protected data shall not create any limitation on the Government or its employees with regard to such data. A copy of each executed company and individual non-disclosure agreement relating to this Contract shall be provided to the Contracting Officer's Representative (COR).

Appropriate restrictive legends will be included by the Contractor on any copies and reproductions made of all or any part of the protected data and any data that is derived from, based upon, incorporates, includes or refers to the protected data. When the Contractor's need for such protected data ends, the protected data shall be returned promptly to the source of the protected data with notice to the COR. However, the obligation not to use, disclose, release, reproduce or otherwise provide or make available such protected data, or any portion thereof, shall continue, even after completion of the Contract, for so long as required by the terms of any agreement pertaining to the protected data between the Contractor and the source of the protected data, or (in the case of Government information) for so long as required by applicable law and regulation. Any actual or suspected unauthorized use, disclosure, release, or reproduction of protected data or violation of this agreement, of which the company or any employee is or may become aware, shall be reported promptly (within one business day after discovery and confirmation) to the Contracting Officer's Representative (COR).

5.0 ONR 5252.216-9706 - LEVEL OF EFFORT (DEC 88)

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in this contract. The total level of effort for performance of this contract shall be **18,000** total hours of direct labor for the base year and **18,000** total hours for each option period, if exercised. The total hours of direct labor shall include subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. A breakdown of labor categories and hours is set forth in paragraph (k) below.

(b) The level of effort for this contract shall be expended at an average rate of **1,500** hours per month. It is understood and agreed that the rate of hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior to the expiration of the term of the contract.

(c) The Contractor is required to notify the Contracting Officer when any of the following situations occur, or are anticipated to occur: If during any three consecutive months the monthly average is exceeded by 25% or, if at any

time it is forecast that during the last three months of the contract less than 50% of the monthly average will be used during any given month; or, when 85% of the total level of effort has been expended.

(d) If, during the term of the contract, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total hours of effort specified would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing, setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fixed fee together with an offer setting forth a proposed level of effort, cost breakdown, and proposed fixed fee for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(e) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(f) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the term of this contract, the Contracting Officer shall either (i) reduce the fixed fee of this contract as follows:

$$\text{Fee Reduction} = \frac{\text{Fixed Fee X (Required LOE Hours - Expended LOE Hours)}}{\text{Required LOE Hours}}$$

or (ii) subject to the provisions of the clause of this contract entitled "Limitation of Cost," require the Contractor to continue to perform the work until the total number of hours of direct labor specified in paragraph (a) shall have been expended, at no increase in the fixed fee of this contract.

(g) In the event the government fails to fully fund the contract in a timely manner, the term of the contract may be extended accordingly with no change to cost or fee. If the government fails to fully fund the contract, the fee will be adjusted in direct proportion to that effort which was performed.

(h) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish hours up to five percent in excess of the total hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fixed fee is required, and no adjustment in the fixed fee shall be made provided that the Contractor has delivered at least 95% of the level of effort required in paragraph (a) above.

(i) It is understood that the mix of labor categories provided by the Contractor under the contract, as well as the distribution of effort among those categories, may vary considerably from the initial mix and distribution of effort which was estimated by the government or proposed by the Contractor.

(j) Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the Clause entitled "Limitation of Costs" or "Limitation of Funds," either of which clauses as incorporated herein applies to this contract.

(k) The anticipated breakdown by labor category of the total level of effort is located in Attachment 2 to this task order.

6.0 SSP 5252.216-9775 INCREASE IN LEVEL OF EFFORT (COST-REIMBURSEMENT) (MAR 1992)

(a) In addition to any other option rights that may be provided to the Government by this contract, the
Government shall have the right, within any given contract period established in Section F of this task
order, to increase the level of effort by up to thirty percent (20%) of the total level of effort for that period at the same labor mix as proposed in the task order for that period. The Contractor agrees to accept such increase in the level of effort at an increase in the estimated cost and an increase in

the fixed
fee which are calculated as follows:

IEC = (ILOE/LOE) x EC
IFF = (ILOE/LOE) x FF
IEC = The increase in the estimated cost.
ILOE = The increase in the level of effort.
LOE = The level of effort contracted for the contract year in which the level of effort is increased.
EC = The estimated cost contracted for in the contract year in which the level of effort is increased.
IFF = The increase in the fixed fee.
FF = The fixed fee contracted for in the contract year in which the level of effort is increased.

This option may be exercised at any time or times prior to the end of the affected period provided however, that the exercise of such option must give the Contractor sufficient time to provide all of the
man-hours for that period, including the increase, by the end of the affected period.

(b) Any exercise by the Government of its option rights under this clause shall be affected by written notice from the Contracting Officer.

(c) The exercise of the option shall be formally reflected by a modification to this task order increasing
the estimated cost and fixed fee and adjusting the Level of Effort provision for the affected contract period.

SECTION I CONTRACT CLAUSES

1.0 FEDERAL ACQUISITION REGULATION CLAUSES

FAR CLAUSE	TITLE	
52.209-10	Prohibition on Contracting with Inverted Domestic Corporations	(DEC 2014)
52.210-1	Market Research	(APR 2011)
52.222-2	Payment For Overtime Premiums - The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0"	(JUL 1990)
52.223-10	Waste Reduction Program	(MAY 2011)
52.227-14	Rights in Data – General	(MAY 2014)
52.227-16	Additional Data Requirements	(JUN 1987)
52.232-40	Providing Accelerated Payments to Small Business Subcontractors Disputes	(DEC 2013)
52.237-2	Protection Of Government Buildings, Equipment And Vegetation	(APR 1984)
52.247-63	Preference For U. S. Flag Air Carriers	(JUN 2003)
52.252-6	Authorized Deviations in Clauses (FILL IN: Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2)	(APR 1984)

2.0 DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES

DFARS CLAUSE	TITLE	
252.203-7003	Agency Office of the Inspector General	(DEC 2012)
252.203-7004	Display of Fraud Hotline Poster(s)	(JAN 2015)
252.203-7999	Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements(DEVIATION 2015-O0010)	(FEB 2015)
252.204-7012	Safeguarding of Unclassified Controlled Information	(NOV 2013)
252.204-7015	Disclosure of Information to Litigation Support Contractors	(FEB 2014)
252.219-7004	Small Business Subcontracting Plan (Test Program)	(OCT 2014)
252.223-7006	Prohibition On Storage And Disposal Of Toxic And Hazardous Materials	(SEP 2014)
252.225-7013	Duty Free Entry	(NOV 2014)
252.227-7000	Non-Estoppel	(OCT 1966)
252.235-7010	Acknowledgment Of Support And Disclaimer	(MAY 1995)
252.235-7011	Final Scientific Or Technical Report	(JAN 2015)

3.0 FAR 52.217-8 - OPTION TO EXTEND SERVICES (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days before the contract expires.

(End of Clause)

4.0 FAR 52.217-9 - OPTION TO EXTEND THE TERM OF THE CONTRACT (MARCH 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 1 day before the contract expires; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.

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

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 5 years

(End of Clause)

SECTION J LIST OF ATTACHMENTS

Exhibit A - DD1423's

Attachment 1 - Personnel Qualifications

Attachment 2 - Anticipated Level of Effort

Attachment 3 - DD254

Attachment 4 - On-Site Requirements