

DELIVERY ORDER

FINAL

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|-------------------------------------|-------------------------------|---------------------------------|---|
| 1. CONTRACT NO. N00178-07-D-5060 | 2. DELIVERY ORDER NO. EHP1 | 3. EFFECTIVE DATE 09/22/2007 | 4. PURCHASE REQUEST NO. N65540-07-NR-55393 |
|-------------------------------------|-------------------------------|---------------------------------|---|

| | | | |
|---|-------------|--|-------------|
| 5. ISSUED BY NSWC, CARDEROCK DIVISION, PHILADELPHIA NAVSSSES Philadelphia PA 19112-1403 edna.tucker@navy.mil 215-897-7647 | CODE N65540 | 6. ADMINISTERED BY DCMA PHILADELPHIA 700 ROBBINS AVENUE, BLDG. 4-A, P.O. BOX 11427 PHILADELPHIA PA 19111-0427 | CODE S3915A |
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| | | | |
|--|------------|----------|---|
| 7. CONTRACTOR Fairmount Automation, Inc. 4621 West Chester Pike Newtown Square PA 19073 | CODE 09TT2 | FACILITY | 8. DELIVERY DATE See Section F |
| | | | 9. CLOSING DATE/TIME (hours local time – Block 5 issuing office) SET ASIDE TYPE |
| | | | 10. MAIL INVOICES TO See Section G |

| | | |
|------------------------------|--|-------------|
| 11. SHIP TO See Section D | 12. PAYMENT WILL BE MADE BY DFAS Columbus Center, North Entitlement Operations P.O. Box 182266 Columbus OH 43218-2266 | CODE HQ0337 |
|------------------------------|--|-------------|

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|-------------------|---|---|---|
| 13. TYPE OF ORDER | D | 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. |
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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.

| | | | |
|----------------------------|--|----------------------|-------------|
| Fairmount Automation, Inc. |  | President | |
| NAME OF CONTRACTOR | SIGNATURE | TYPED NAME AND TITLE | DATE SIGNED |

14. ACCOUNTING AND APPROPRIATION DATA
See Section G

| 15. ITEM NO. | 16. SCHEDULE OF SUPPLIES/SERVICES | 17. QUANTITY ORDERED/ACCEPTED* | 18. UNIT | 19. UNIT PRICE | 20. AMOUNT |
|-------------------------|-----------------------------------|--------------------------------|----------|----------------|------------|
| See the Following Pages | | | | | |

| | | | |
|---|--|--|--|
| *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. | 21. UNITED STATES OF AMERICA By: Regina Shuster | 09/22/2007 CONTRACTING/ORDERING OFFICER | 22. TOTAL  |
|---|--|--|--|

| SECTION | DESCRIPTION | SECTION | DESCRIPTION |
|---------|---------------------------------------|---------|-------------------------------|
| B | SUPPLIES OR SERVICES AND PRICES/COSTS | H | SPECIAL CONTRACT REQUIREMENTS |
| C | DESCRIPTION/SPECS/WORK STATEMENT | I | CONTRACT CLAUSES |
| D | PACKAGING AND MARKING | J | LIST OF ATTACHMENTS |
| E | INSPECTION AND ACCEPTANCE | | |
| F | DELIVERIES OR PERFORMANCE | | |
| G | CONTRACT ADMINISTRATION DATA | | |

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GENERAL INFORMATION

1. This is a performance based statement of work. The effort performed hereunder will be evaluated in accordance with the performance standards/acceptable quality levels described below and the evaluation methods described in provision CAR-H09 in Section H.NOTE:

2. Incremental Funding is hereby added to this Task Order as follows:

100001 72571369 [REDACTED]
LLA :
AA 97X4930.NH1C.000 77777 0 000 167000 2F 000000 071914580752

100002 72571514 [REDACTED]
LLA :
AB 97X4930.NH1C.000 77777 0 000167 2F 000000 071914440152 [REDACTED]

100003 72571465 [REDACTED]
LLA :
AC 97X4930.NH1C 000 77777 0 000167 2F 000000 071914580720 [REDACTED]

100004 72571463 [REDACTED]
LLA :
AD 97X4930.NH1C 000 77777 0 000167 2F 000000 \$071914580799 [REDACTED]

300001 72571460 [REDACTED]
LLA :
AE 97X4930.NH1C 000 77777 0 000167 2F 000000 071914580761 [REDACTED]

300002 72571542 [REDACTED]
LLA :
AF 1721711 A224 252 X8WMW 0 068342 2D 000000 231669004A3F [REDACTED]
Standard Number: N0002407WX21602 AA

3. NAVSEA Clause 5252.232-9014 ALLOTMENT OF FUNDS (MAY 1993) has been revised accordingly.

This task order is incrementally funded by [REDACTED]

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SECTION B SUPPLIES OR SERVICES AND PRICES

CLIN - SUPPLIES OR SERVICES

For Cost Type Items:

| Item | Supplies/Services Qty | Unit | Est. Cost | Fixed Fee | CPFF |
|--------|--|---------|---------------|---------------|---------------|
| 1000 | Engineering and Technical Support Services for Smart Valve Rupture Detection Isolaton Realignment Software Dev. (RDIR) (TBD) | 1.0 Lot | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |
| 100001 | [REDACTED] Funding | | | | |
| 100002 | [REDACTED] Funding | | | | |
| 100003 | [REDACTED] Funding | | | | |
| 100004 | [REDACTED] Funding | | | | |
| 1100 | OPTION 1 Engineering and Technical Support Services for Smart Valve Rupture Detection Isolaton Realignment Software Dev. (RDIR) (TBD) Option | 1.0 Lot | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |

For ODC Items:

| Item | Supplies/Services Qty | Unit | Est. Cost |
|------|---|---------|---------------|
| 3000 | Support Costs for CLIN 1000 including materials and travel. Government estimate includes \$ [REDACTED] for travel and \$ [REDACTED] for incidental material. Both inclusive of G&A. (TBD) (TBD) | 1.0 Lot | \$ [REDACTED] |

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300001 [REDACTED] Funding

300002 [REDACTED] Funding

3100 OPTION 1 1.0 Lot \$ [REDACTED]
 Support Costs for
 CLIN 1100 -
 Government
 estimate includes
 \$ [REDACTED] for
 travel and
 \$ [REDACTED] for
 incidental
 material. Both
 inclusive of G&A.
 (TBD) (TBD)
 Option

For Cost Type Items:

| Item | Supplies/Services Qty | Unit | Est. Cost | Fixed Fee | CPFF |
|------|--|---------|---------------|---------------|---------------|
| 4000 | OPTION 2 Engineering and Technical Support Services for Smart Valve Rupture Detection Isolaton Realignment Software Dev. (RDIR) (TBD) Option | 1.0 Lot | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |
| 4100 | OPTION 3 Engineering and Technical Support Services for Smart Valve Rupture Detection Isolaton Realignment Software Dev. (RDIR) (TBD) Option | 1.0 Lot | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |
| 4200 | OPTION 4 Engineering and Technical Support Services for Smart Valve Rupture Detection Isolaton Realignment Software Dev. (RDIR) (TBD) Option | 1.0 Lot | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |
| 4300 | OPTION 5 Engineering and Technical Support Services for Smart Valve | 1.0 Lot | \$ [REDACTED] | \$ [REDACTED] | \$ [REDACTED] |

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Rupture Detection
Isolaton
Realignment
Software Dev.
(RDIR) (TBD)
Option

For ODC Items:

| Item | Supplies/Services Qty | Unit | Est. Cost |
|-------|---|---------|---------------|
| ----- | | | |
| 6000 | OPTION 2 Support Costs for Clin 4000 - Option 2 Government estimate includes \$ [REDACTED] for incidental materials and \$ [REDACTED] for travel. Both inclusive of G&A (TBD) (TBD) Option | 1.0 Lot | \$ [REDACTED] |
| 6100 | OPTION 3 Support Costs for CLIN 4100 - Government estimate includes \$ [REDACTED] for Travel and \$ [REDACTED] for incidental Material costs. Both inclusive of G&A. (TBD) (TBD) Option | 1.0 Lot | \$ [REDACTED] |
| 6200 | OPTION 4 Support costs for CLIN 4200 Government estimates includes \$ [REDACTED] for travel and \$ [REDACTED] for incidental Material costs. Both inclusive of G&A. (TBD) (TBD) Option | 1.0 Lot | \$ [REDACTED] |
| 6300 | OPTION 5 Support Costs for CLIN 4300. Government estimate includes \$ [REDACTED] for | 1.0 Lot | \$ [REDACTED] |

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Travel and
 \$ [REDACTED] for
 incidental
 Material costs.
 Both inclusive of
 G&A.
 (TBD) (TBD)
 Option

LEVEL OF EFFORT:

The level of effort for the performance of this contract is based upon an anticipated total estimated level of effort of 86,250 man-hours of direct labor. The estimated composition of the 86,250 man-hours of direct labor can be found in the chart below. On Site Labor refers to labor performed at the Contractor's Facility and Off Site Labor refers to labor performed at NSWCCD in Philadelphia, PA.

Offerors are to propose on the labor categories and hour estimates provided as the Level of Effort. Offerors who propose other than what is specified may be considered non-responsive.

| | Year 1 | Year 2 | | Year 3 | Year 4 | Year 5 | |
|--------------------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|-------|
| Period of Performance | 9/25/07-9/24/08 | 9/25/08-4/4/09 | 4/5/09-9/24/09 | 9/25/09-9/24/10 | 9/25/10-9/24/11 | 9/25/11-9/24/12 | |
| CLIN | 1000 | 1100 | 4000 | 4100 | 4200 | 4300 | |
| Labor Category Personnel | Base Period | Option 1 | Option 2 | Option 3 | Option 4 | Option 5 | TOTAL |
| Program Manager | | | | | | | |
| Senior Engineer | | | | | | | |
| Senior Programmer | | | | | | | |
| Engineer | | | | | | | |
| Programmer | | | | | | | |
| Analyst | | | | | | | |
| Clerk Typist | | | | | | | |
| Database Admin | | | | | | | |
| Drafter | | | | | | | |
| Logistician | | | | | | | |
| Sr. Eng. Tech | | | | | | | |
| Sr. Program Analyst | | | | | | | |
| Sr. Technician | | | | | | | |
| Technician Writer | | | | | | | |
| Technician | | | | | | | |
| TOTAL | | | | | | | |

Note: If fee is included in the pass through rate for subcontractor labor costs, the prime contractor is requested to identify what percentage of the pass through cost is considered fee in their cost proposal. The maximum labor pass through rate (which includes all adders and any prime contractor fee applied to subcontractor labor costs) shall not exceed 8%.

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SECTION C DESCRIPTIONS AND SPECIFICATIONS

CAR-C01 Software Development Requirements (DEC 2006) (NSWCCD)

(a) The contractor shall define a general Software Development Plan (SDP) appropriate for the computer software effort to be performed under this contract. The SDP shall, at a minimum:

(1) Define the contractor's proposed life cycle model and the processes used as a part of that model. In this context, the term "life cycle model" is as defined in IEEE/EIA Std. 12207.0;

(2) Contain the information defined by IEEE/EIA Std. 12207.1, section 5.2.1 (generic content) and the Plans and Procedures in Table 1 of IEEE/EIA Std. 12207.1. In all cases, the level of detail shall be sufficient to define all software development processes, activities, and tasks to be conducted;

(3) Identify the specific standards, methods, tools, actions, strategies, and responsibilities associated with development and qualification;

(4) Document all processes applicable to the system to be acquired, including the Primary, Supporting, and Organizational life cycle processes as defined by IEEE/EIA Std. 12207 as appropriate. Such processes shall be equivalent to those articulated by CMMI[®];

(5) Include the content defined by all information items listed in Table 1 of IEEE/EIA Std. 12207.1, as appropriate for the system and be consistent with the processes proposed by the developers;

(6) Adhere to the characteristics defined in section 4.2.3 of IEEE/EIA Std. 12207, as appropriate;

(7) Describe the overall life cycle and include primary, supporting, and organizational processes based on the work content of this contract;

(8) Be in accordance with the framework defined in IEEE/EIA Std. 12207.0, including, but not limited to, defining the processes, the activities to be performed as a part of the processes, the tasks which support the activities, and the techniques and tools to be used to perform the tasks;

(9) Contain a level of information sufficient to allow the use of the SDP as the full guidance for the developers. In accordance with section 6.5.3a of IEEE/EIA Std. 12207.1, such information shall at a minimum contain, specific standards, methods, tools, actions, reuse strategy, and responsibility associated with the development and qualification of all requirements, including safety and security.

(b) The SDP shall be delivered to the Government for concurrence under CDRL A00x and shall not vary significantly from that proposed to the Government for evaluation for award. The contractor shall follow the Government concurred with SDP for all computer software to be developed or maintained under this effort. Any changes, modifications, additions or substitutions to the SDP also require prior Government concurrence.

1. OBJECTIVE

1.1. The objective of this contract is to obtain technical expertise in the area of Smart Valve Rupture-Detection-Isolation-Realignment (RDIR) software development. These services are required for the development of Smart Valve RDIR software in DDG-1000 Firemain and Chilled Water Systems, which is being lead by NSWCCD-SSES Code 927.

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2. DEFINITIONS

- **Smart Valve** – A smart valve is a programmable automated valve. It consists of a valve, pressure transducers, and actuator, a microprocessor/controller, and a fieldbus communication interface with the engineering control system. Smart Valves are used to autonomously activate water mist in machinery spaces with class B hazards and to autonomously isolate piping system damage without depending upon communications beyond the valve itself or a local fieldbus. Smart valves shall be used in the Chilled Water system and shall be placed according to Section 532. Smart valves shall be used in the Firemain system and shall be placed according to Section 521. Smart valves shall be used in the Water Mist systems and shall be placed according to section 555. (Ref: DDX DB&P Spec Section 505).

- **Flow Inventory Isolation Logic** – Flow inventory isolation logic consists of comparing supply and demand flow rates into and out of segments of the system to determine if mass is being conserved. When abnormally high net flow is detected into a segment, the isolation valves that bound that segment close. If the main loop segment includes branches, then the flow balance must account for flows in the branches. Flow inventory must be performed at the device level using communications at the fieldbus level or within the ECS tiers. (Ref: PPD 802-7651365). Please see additional technical references for further explanation of flow inventory logic.

- **Hydraulic Resistance Isolation Logic** – The basis for the logic that resides in each Smart Valve is as follows: When a rupture or pipe-break occurs, the valve in that flow path will experience an immediate drop in downstream pressure and an increase in fluid flow. The hydraulic resistance is therefore reduced, allowing the valve to detect the rupture. (Ref: PPD 802-7651365) Please see additional technical references for further explanation of hydraulic resistance logic.

- **Rupture Detection Isolation and Reconfiguration (RDIR) Software** – Software programmed into the Smart Valve device-level programming environment that contains, at its core, either flow inventory, hydraulic resistance, or a combination of the two to meet Firemain and Chilled Water system level RDIR requirements.

- **Device Level Software Modules (DLSM)** – RDIR software that is programmed into the Smart Valve programming environment that will give the Smart Valve RDIR capability.

- **Device Level Control System (DLCS)** – The DLCS for DDG-1000 Smart Valves installed in the Firemain, Chilled Water, and Low-Pressure Water Mist systems consist of the Smart Valve and the DLSM, which contains RDIR logic and resides within the Smart Valve programming environment.

3. BACKGROUND

NSWCCD-SSES Code 927 has transitioned the smart valve software development proposal into a more refined work breakdown structure that has been used to create a DDG-1000 Smart Valve software development MS Project integrated master schedule (IMS) or Plan of Action & Management (POA&M). The IMS follows a standard waterfall life cycle process for software development. The project is broken down into 10 Phases of development. The IMS is provided as *reference AR-1*. (It is important to note that the shipbuilders have not created a spec or purchase order for Smart Valve RDIR software). Requirements do not reside in any single document. Therefore, the IMS reflects a schedule where system level requirements for a Smart Valve DLCS that is derived from existing and Firemain and Chilled Water design artifacts. The design artifacts are listed in the Government Furnished Information, Numbers 8.1 through 8.12.

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3.1. System level requirements flow into a system level architecture, which in turn define the software requirements and software architecture, etc.

3.2. NSWCCD-SSES Code 927 has also developed an organizational chart that shows the relationship of the contractor(s) to the rest of the Smart Valve Team. The Smart Valve Team organizational chart is provided in *reference AR-1*.

3.3. NSWCCD-SSES Code 927 has developed a Software Development Plan (SDP) for this project. The SDP is in accordance with the NSWCCD-SSES Standard Software Process (SSP), which has been assessed at CMMi Level 3.

3.4. NSWCCD-SSES Code 927 has developed a Risk Matrix that is in accordance with the PMS 500 Risk Management Process.

4. OVERVIEW OF SERVICES TO BE PERFORMED

4.1. *Familiarization with Technical and Programmatic Background* – The Contractor shall provide technical services to support Smart Valve software development. In order to accomplish this, the Contractor will first need to be familiar with the technical and programmatic aspects of the project. The Contractor shall review Technical References located in the Government Furnished Information, Numbers 8.1 through 8.4. The Contractor shall also review Programmatic References located in the Government Furnished Information 8.5 through 8.12. The Contractor will also need to adhere to the development phase schedule and budget stated in the IMS, conform to the software development process as stated in the project SDP, be conscience of the DDG-1000 Risk process, and be aware of the Contractor’s position within the project’s organizational chart (see *reference AR-1*).

4.2. Design artifacts, listed in References 3 - 15, will be given to the contractor to support the technical services that are described in this statement of work.

4.3. The Contractor’s development effort shall be managed and executed in accordance with NSWC Philadelphia’s CMMi Level III Standard Software Process (SSP).

4.4. This Statement of Work begins in the Project’s Software Architectural Design Phase (Reference IMS).

4.5. All work products shall be delivered to the Code 927 Smart Valve RDIR software development Task Order Manager (TOM). POC: Peter Duong (215) 897-8326, peter.duong@navy.mil

5. DETAILED TASK DESCRIPTION

The Contractor shall provide the following services as applicable in a collaborative conjunction with NSWCCD-SSES Code 927 following the NSWC Philadelphia CMMi Level III SSP.

5.1 SOFTWARE ARCHITECTURAL DESIGN PHASE

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5.1.1 The Contractor shall develop a Firemain and a Chilled Water Software Design Description (SDD) document that shall define the Firemain and Chilled Water DLSM architecture (to assembly level) and allocate software requirements to assemblies that constitute the architecture. Each SDD shall identify software assemblies that constitute the DLSM architecture. In each SDD a sequence diagram will be developed for each DLSM use case to show how the assemblies behave and interact in order to represent service to external actions. Each SDD will also include external DLSM interfaces, which shall be defined to the “code level” (i.e., specify interface data, the data format, and details about the data exchange). Each SDD shall also include implementation, deployment and execution view in addition to the structural or architectural view. Each SDD shall have an appendix, which will include a requirements allocation table that maps DLSM requirements to software assemblies. The overall format of each SDD shall follow that of IEEE 1016-1998, “Recommended Practice for Software Design Descriptions”. The Contractor shall inform the Project Lead if a requirement change is necessary to support either SDD. Upon completion of the drafts for each SDD, the Contractor shall participate in an informal review with NSWCCD representatives to review the drafts of both SDD documents.

5.1.2 The Contractor shall develop a Firemain and a Chilled Water DLSM Test Plan for qualifying each DLSM including a mapping between high-level test cases and DLSM requirements validation. Each DLSM Test Plan shall define schedule for testing, test responsibilities, follow-on test documents (unit integration, qualification test procedures, reports, etc.). Each of these test plans shall describe all aspects of DLSM testing (i.e., unit qualification), and shall also describe the test cases for validating DLSM requirements. Each DLSM Test Plan will also provide an overview of the DLSM qualification test strategy (e.g., the DLSM is executed on the target control system hardware, which is interfaced at some level with a plant simulation, envisioned to be the second release (R2) of the Government furnished (GFM & GFI) Computer Based Simulator (CBS). Each DLSM Test Plan shall have an appendix that includes a requirements allocation table that maps each test case to the DLSM requirements it validates. Upon completion of the drafts for each DLSM Test Plan, the Contractor shall participate in an informal review with NSWCCD representatives to review the drafts of both DLSM Test Plans.

5.1.3 The Contractor shall develop a Firemain and a Chilled Water DLSM Integration Plan. Each DLSM Integration Plan will describe the plan for building, integrating, and performing DLSM integration testing. Upon completion of the drafts for each DLSM Integration Plan, the Contractor shall participate in an informal review with NSWCCD representatives to review the drafts of both DLSM Integration Plans.

5.1.4 Upon completion of the preliminary drafts of the Software Design Description (SDD) Documents, DLSM Test Plans, and DLSM Integration Plans the Contractor shall be required to participate in a Software Preliminary Design Review. This design review will be conducted to review each of the three documents developed for Firemain and Chilled Water before the project will be allowed to proceed into the Software Detailed Design Phase.

5.2 SOFTWARE DETAILED DESIGN PHASE

5.2.1 The Contractor shall complete the design of each DLSM and describe details of the final design in each DLSM Software Design Description. This task will include: completing detailed design section of both the Firemain and Chilled Water SDD (i.e., design of assemblies), deriving the internal logic and interfaces for each assembly, and developing use case realizations (sequence diagrams) to show functions of and fundamental relationships between modules (e.g., functions, databases, classes, sub-schemas, etc.) that make up each assembly. This task will also include updating architectural, implementation, deployment, and execution views in the architectural design section of each SDD. Upon completion of each SDD, the Contractor shall release each of the final SDDs with architectural design, detailed design, and traceability matrix completed.

5.2.2 The Contractor shall finalize each DLSM Test Plan. This task shall include updating unit test cases and referencing each DLSM Unit Test Procedure (to be developed in the SW Code & Unit Test Phase) that implement the unit test cases, updating qualification test cases and referencing DLSM Qualification Test Procedures that implement the qualification test cases, and updating requirements and high-level design for each DLSM qualification test environment (i.e., R2 CBS) in light of details uncovered while drafting qualification test procedures. Upon completion

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of each DLSM Test Plan, the Contractor shall participate in a formal peer review. The peer review shall be conducted to review both of the finalized DLSM Test Plans.

5.2.3 The Contractor shall finalize each of the DLSM Integration Plans that will schedule the development of individual software modules and their integration into DLSM assemblies, which are then integrated as the DLSM. Each DLSM Integration Plan will also identify general activities involved in deploying each DLSM assembly in the qualification test environment. This task shall also include updating test cases for software integration and integration testing, and referencing DLSM Integration and Test Procedures the implement the test cases.

5.2.4 The Contractor shall develop a Firemain and a Chilled Water DLSM Unit Test Procedure that implements the subset of unit (assembly-level) test cases identified in each of the DLSM Test Plans that will be used to validate software requirements. Each DLSM Unit Test Procedure shall also describe each unit test environment.

5.2.5 The Contractor shall create a separate draft version of the DLSM Integration Procedure for both Firemain and Chilled Water. Each DLSM Integration Procedure will center on the integration of the DLSM assemblies into each qualification test environment by generating procedures for deploying the DLSM assemblies into each qualification test environment, as well as generating test procedures that will verify that the DLSM assemblies were integrated into each qualification test environment properly.

5.2.6 The Contractor shall create a separate draft version of the DLSM Qualification Test Procedure for both Firemain and Chilled Water. Each DLSM Qualification Test Procedure shall validate the behaviors of the DLSM that are implemented by several different software assemblies, multiple instances of a single assembly, or some combination of the two (e.g., multiple instances of a smart valve assembly provides automatic rupture detection, isolation, and reconfiguration behavior). Unit test reports shall be referenced for validation of requirements implemented by a single instance of a software assembly (e.g., a smart valve assembly shall respond to open/close commands). Where applicable, the qualification test procedures may re-validate requirements previously validated through unit testing. During the development of each DLSM Qualification Test Procedures, the Contractor shall reference IEEE Std. 829-1998; "IEEE Standard for Software Test Documentation," which defines required content of the test plans, test cases, and test procedures.

5.2.7 Upon completion of the Software Detailed Design Phase, the Contractor shall participate in a Software Critical Design Review. This design review will be conducted to review and approve all the documents created during the Software Detailed Design Phase for both Firemain and Chilled Water before the project will be allowed to proceed into the Software Coding & Unit Testing Phase.

5.3 SOFTWARE CODING & UNIT TESTING PHASE

5.3.1 The Contractor shall code and unit test both Firemain and Chilled Water DLSM software modules and assemblies. The Contractor shall code and unit test each software unit in the order specified by the software integration section of each DLSM Integration Plan. At this point the Contractor shall also finalize each of the DLSM Unit Test Procedures. Each software unit shall be coded in accordance with their respective DLSM SDD. At the completion of coding the software units, the Contractor shall participate in a peer review of the code to verify that the code is documented properly, required features were implemented, and that any formatting requirements were adhered to. The Contractor shall then implement a unit test environment and unit test code in accordance with each DLSM Unit Test Procedure. The Contractor shall also prepare a memorandum-type DLSM Unit Test Report for both Firemain and Chilled Water. Each of the DLSM Test Plans and DLSM Unit Test Procedures may reference their corresponding DLSM Unit Test Report as verification that certain software requirements have been validated.

5.3.2 The Contractor shall finalize the DLSM Integration Procedures for both Firemain and Chilled Water in

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preparation for integration activities.

5.3.3 The Contractor shall finalize the DLSM Qualification Test Procedures for both Firemain and Chilled Water in preparation for qualification test activities.

5.3.4 The Contractor shall participate in the Software Integration & Test Readiness Review. This review will be conducted to review the elements of the Software Coding & Unit Testing Phase for both Firemain and Chilled Water before the project will be allowed to proceed into the Software Integration and Qualification Phase.

5.4 SOFTWARE INTEGRATION AND QUALIFICATION

5.4.1 The Contractor shall integrate each of the Firemain and Chilled Water DLSM assemblies into their appropriate qualification test environment in accordance with their respective DLSM Integration Procedures. The Contractor activities shall include deploying each of the DLSM assemblies in their respective test environment, configuring the deployed DLSM assemblies, and then integrating the assemblies to the DLSM level. The Contractor shall then conduct integration testing and then develop a memorandum-type DLSM Integration Report for each set of Firemain and Chilled Water DLSMs that describes the results of the software integration and test activities of each. Each DLSM Integration Report shall also identify issues encountered during the testing activities of both Firemain and Chilled Water DLSMs. The marked-up integration procedures shall be included as an enclosure to each report. The Contractor shall then conduct informal (i.e., dry-run) qualification testing using each DLSM Qualification Test Procedure.

5.4.2 The Contractor shall conduct qualification testing in accordance with each of the DLSM Qualification Test Procedures for both Firemain and Chilled Water. Qualification testing will be a formal test event witnessed by the appropriate stakeholders. The Contractor shall develop a memorandum-type DLSM Qualification Test Reports for both Firemain and Chilled Water that describes the results of the qualification test activities, identifies the software defects that are discovered during testing, and plans for the resolution of the significant defects. The marked-up qualification test procedures shall be included as an enclosure to each of their respective reports. If defect fixes are deemed necessary, the Contractor shall update the respective DLSM, conduct regression testing, and update and re-submit respective DLSM Qualification Test Report along with the marked-up sections of the test procedures that were regression tested.

5.4.3 Upon completion of the Software Integration and Qualification activities, the Contractor shall participate in a System Integration & Test Readiness Review. This review shall be conducted to review the results of the integration and qualification testing for both Firemain and Chilled Water.

6. GOVERNMENT FURNISHED EQUIPMENT

6.1 The Code 981 Computer Based Simulator (CBS R1 & R2) and hardware for the CBS R2 testing environment will be provided by the Government, and will reside in the 87 building, "War Room." The CBS and associated hardware will be developed and established as part of the software qualification test environment by NSWCCD-SSSES Codes 927 and 981, and will be used during the Software Coding & Unit Testing Phase of the Smart Valve Software Development Project.

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7. GOVERNMENT FURNISHED SERVICES

7.1 NSWCCD will facilitate Team Center access to the awarded Contractor. Team Center will be used to post all relevant documents associated with the Firemain and Chilled Water Smart Valve Software Development.

8. GOVERNMENT FURNISHED INFORMATION

8.1. "Chilled Water System Diagram – latest rev." (BIW Drawing Number: BS532001)

8.2. "Chilled Water System Description – latest rev." (BIW Drawing Number: BS532001SD)

8.3. "Firemain System Diagram" (BIW Drawing Number: BS521001)

8.4. "Firemain System Description – latest rev." (BIW Drawing Number: BS521001SD)

8.5. PPD 802-7651365 – Specification for Fire Suppression System – Control & Electrical Power Requirements – FOR THE DD (X) PROGRAM 15 August 2005

8.6. DD(X) Engineering Control System Component (ECSC) Architecture Design Description (CADD)

8.7. Procurement Specification No. 03031-01 (Smart Valve Procurement Spec / Statement of Work)

8.8. DDG-1000 CECS Fieldbus Study Results

8.9. DDX Program Design, Build, and Process (DB&P) Specification – Section 521 Seawater Service Systems

8.10. DDX Program DB&P Specification – Section 532 Fresh Water Service Systems

8.11. DDX Program DB&P Specification – Section 505 General Requirements for Piping Systems

8.12. DDX Program DB&P Specification – Section 555 Fire Extinguishing Systems

9. SPECIAL PROVISIONS – GENERAL

9.1 Normal Place of Performance while at a Government operated facility – Work will be performed at the NSWCCD DDG-

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1000 “War Room” facility in Building 87.

9.2 Transportation of Government Equipment – The Contractor shall coordinate shipping of Government equipment or material to or from NSWCCD in accordance with local NSWCCD shipping policies and procedures.

9.3 Hours of Work – Work shall be scheduled 8 hours a day, at least 5 days a week, excluding Federal Holidays, between the hours of 0600 and 1730 with a 30-minute lunch period to be taken between the hours of 1100 and 1300. This allows up to 3 hours flex time during the normal duty day. Overtime or odd shifts may be permitted when necessary.

9.4 Safety – The Contractor shall comply with all Navy occupational health and safety regulations. There shall be no smoking within any of the work areas.

9.5 Physical Security – The Contractor shall be responsible for safeguarding all Government property provided for Contractor use. At the close of each work day, Government facilities, equipment, and materials shall be secured. A daily log shall be maintained specifying areas secured and initialed by the individual responsible for securing each area.

10. TECHNICAL POINT OF CONTACT (TPOC):

Levi Nunley

NSWCCD-Philadelphia Code 927

(215) 897-7225

11. TASK ORDER MANAGER (TOM)

Peter Duong

NSWCCD-Philadelphia Code 927

(215) 897-8326

Appendix (References)

AR-1 - Firemain and Chilled Water Smart Valve Software Development Plan of Action and Management (POA&M)

AR-2 - Firemain and Chilled Water Smart Valve Software Development Plan (SDP)

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AR-3 - Firemain PDS DLCS Component Requirement Specification (CRS)

AR-4 - Chilled Water DLCS Component Requirement Specification (CRS)

AR-5 - Firemain PDS DLCS Concept of Operation (CONOPS)

AR-6 - Chilled Water DLCS Concept of Operation (CONOPS)

AR-7 - Firemain PDS DLCS Component Architecture Design Description (CADD)

AR-8 - Chilled Water DLCS Component Architecture Design Description (CADD)

AR-9 - Firemain PDS DLCS RDIR Risk Mitigation Test Plan

AR-10 - Chilled Water DLCS RDIR Risk Mitigation Test Plan

AR-11 - Firemain PDS DLCS RDIR Risk Mitigation Test Environment (R1 CBS) Software Development Folder (SDF)

AR-12 - Chilled Water DLCS RDIR Risk Mitigation Test Environment (R1 CBS) Software Development Folder (SDF)

AR-13 - Firemain PDS DLCS Recommended DLCS Qualification Test Plan

AR-14 - Chilled Water PDS DLCS Recommended DLCS Qualification Test Plan

AR-15 - Firemain PDS DLCS DLSM Software Requirement Specification (SRS)

AR-16 - Chilled Water PDS DLCS DLSM Software Requirement Specification (SRS)

AR-17 - “Chilled Water System Diagram – latest rev.” (BIW Drawing Number: BS532001)

AR-18 - “Chilled Water System Description – latest rev.” (BIW Drawing Number: BS532001SD)

AR-19 - “Firemain System Diagram” (BIW Drawing Number: BS521001)

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AR-20 - "Firemain System Description – latest rev." (BIW Drawing Number: BS521001SD)

AR-21 - PPD 802-7651365 – Specification for Fire Suppression System – Control & Electrical Power Requirements – FOR THE DD (X) PROGRAM 15 August 2005

AR-22 - DD(X) Engineering Control System Component (CECS) Architecture Design Description (CADD)

AR-23 - Procurement Specification No. 03031-01 (Smart Valve Procurement Spec / Statement of Work)

AR-24 - DDX Program Design, Build, and Process (DB&P) Specification – Section 521 Seawater Service Systems

AR-25 - DDX Program DB&P Specification – Section 532 Fresh Water Service Systems

AR-26 - DDX Program DB&P Specification – Section 505 General Requirements for Piping Systems

AR-27 - DDX Program DB&P Specification – Section 555 Fire Extinguishing Systems

This is a performance based statement of work. The effort performed hereunder will be evaluated in accordance with the performance standards/acceptable quality levels described below and the evaluation methods described in provision CAR-H09 in Section H.

NOTE: Some of these manuals/drawings have been marked Distribution Statement D in accordance with DoD Directive 5230.24. In order to obtain the manuals/drawings, potential offerors must be certified by the Defense Logistics Information Service (DLIS) under the Joint Certification from DLIS . Information can be obtained at www.dlis.dla.mil/jcp. Requests for manuals and drawings must include identification of JCP certification number assigned by DLIS. Please email all requests for drawings/manuals to edna.tucker@navy.mil.

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SECTION D PACKAGING AND MARKING

HQ D-2-0008 MARKING OF REPORTS (NAVSEA) (SEP 1990)

All reports delivered by the Contractor to the Government under this contract shall prominently show on the cover of the report:

- (1) name and business address of the Contractor
- (2) contract number
- (3) task order number
- (4) sponsor: _____

(Name of Individual Sponsor)

(Name of Requiring Activity)

(City and State)

| | | |
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SECTION E INSPECTION AND ACCEPTANCE

Inspection and Acceptance shall be performed at Destination by the Government.

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SECTION F DELIVERABLES OR PERFORMANCE

CLIN - DELIVERIES OR PERFORMANCE

The periods of performance for the following firm items are from date of task order award through 12 months thereafter, estimated at:

| | |
|------|-----------------------|
| 1000 | 9/25/2007 - 9/24/2008 |
| 3000 | 9/25/2007 - 9/24/2008 |

The period of performance for the following option items are from date of option exercise through 12 months thereafter, estimated at:

| | |
|------|-----------------------|
| 1100 | 9/25/2008 - 4/4/2009 |
| 3100 | 9/25/2008 - 4/4/2009 |
| 4000 | 4/5/2009 - 9/24/2009 |
| 4100 | 9/25/2009 - 9/24/2010 |
| 4200 | 9/25/2010 - 9/24/2011 |
| 4300 | 9/25/2011 - 9/24/2012 |
| 6000 | 4/5/2009 - 9/24/2009 |
| 6100 | 9/25/2009 - 9/24/2010 |
| 6200 | 9/25/2010 - 9/24/2011 |
| 6300 | 9/25/2011 - 9/24/2012 |

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SECTION G CONTRACT ADMINISTRATION DATA

Task Order Manager
NSWCCD-Philadelphia
Peter Duong, Code 927
5001 South Broad Street
Philadelphia, PA 19112-1403
peter.duong@navy.mil
215-897-8326

CAR-GII INVOICE INSTRUCTIONS (OCT 2006) (NSWCCD)

(a) In accordance with the clause of this contract entitled "ELECTRONIC SUBMISSION OF PAYMENT REQUESTS" (DFARS 252.232-7003), the Naval Sea Systems Command (NAVSEA) will utilize the DoD Wide Area Workflow Receipt and Acceptance (WAWF) system to accept supplies/services delivered under this contract. This web-based system located at <https://wawf.eb.mil> provides the technology for government contractors and authorized Department of Defense (DoD) personnel to generate, capture and process receipt and payment-related documentation in a paperless environment. Invoices for supplies/services rendered under this contract shall be submitted electronically through WAWF. Submission of hard copy DD250/invoices may no longer be accepted for payment.

(b) It is recommended that the person in your company designated as the Central Contractor Registration (CCR) Electronic Business (EB) Point of Contact and anyone responsible for the submission of invoices, use the online training system for WAWF at <http://wawftraining.com>. The Vendor, Group Administrator (GAM), and sections marked with an asterisk in the training system should be reviewed. Vendor Quick Reference Guides also are available at <http://acquisition.navy.mil/navyaos/content/view/full/3521/>. The most useful guides are "Getting Started for Vendors" and "WAWF Vendor Guide".

(c) The designated CCR EB point of contact is responsible for activating the company's CAGE code on WAWF by calling 1-866-618-5988. Once the company is activated, the CCR EB point of contact will self-register under the company's CAGE code on WAWF and follow the instructions for a group administrator. After the company is set-up on WAWF, any additional persons responsible for submitting invoices must self-register under the company's CAGE code at <https://wawf.eb.mil>.

(d) The following information regarding invoice routing is provided for completion of the invoice in WAWF:

| | |
|-------------------------------------|--------------|
| WAWF Invoice Type | Cost Voucher |
| Issuing Office DODAAC | N65540 |
| Admin DODAAC | S3915A |
| Inspector DODAAC (if applicable) | N/A |
| Acceptor DODAAC | N65540 |
| LPO DODAAC (if applicable) | N/A |
| Pay DODAAC: | HQ0337 |
| DCAA Auditor DODAAC (if applicable) | |

Attachments created in any Microsoft Office product may be attached to the WAWF invoice, e.g., backup documentation, timesheets, etc. Maximum limit for size of each file is 2 megabytes. Maximum limit for size of files per invoice is 5 megabytes.

(e) Before closing out of an invoice session in WAWF, but after submitting the document(s), you will be prompted to send additional email notifications. Click on "Send More Email Notification" and add the acceptor/receiver email addresses noted below in the first email address block, and add any other additional email addresses desired in the following blocks. This additional notification to the government is important to ensure that the acceptor/receiver is aware that the invoice documents have been submitted into WAWF.

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Send Additional Email Notification To:

TOM - peter.duong@navy.mil

Contract Specialist - edna.tucker@navy.mil

(f) The contractor shall submit invoices for payment per contract terms and the government shall process invoices for payment per contract terms.

(g) If you have any questions regarding WAWF, please contact the WAWF helpdesk at the above 1-866 number or the NSWCCD WAWF point of contact Brian D. White at (301) 227-1172 or brian.d.white@navy.mil.

(End of Clause)

SEA 5252.216-9122 LEVEL OF EFFORT (DEC 2000)

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in Sections B and C of this contract. The total level of effort for the performance of this contract shall be 86250 total man-hours of direct labor, including subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort.

(b) Of the total man-hours of direct labor set forth above, it is estimated that 0 man-hours are uncompensated effort.

Uncompensated effort is defined as hours provided by personnel in excess of 40 hours per week without additional compensation for such excess work. All other effort is defined as compensated effort. If no effort is indicated in the first sentence of this paragraph, uncompensated effort performed by the Contractor shall not be counted in fulfillment of the level of effort obligations under this contract.

(c) Effort performed in fulfilling the total level of effort obligations specified above shall only include effort performed in direct support of this contract and shall not include time and effort expended on such things as (local travel to and from an employee's usual work location), uncompensated effort while on travel status, truncated lunch periods, work (actual or inferred) at an employee's residence or other non-work locations (except as provided in paragraph (j) below), or other time and effort which does not have a specific and direct contribution to the tasks described in Sections B and C.

(d) The level of effort for this contract shall be expended at an average rate of approximately 332 hours per week. It is understood and agreed that the rate of man-hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total man-hours of effort prior to the expiration of the term hereof, except as provided in the following paragraph.

(e) If, during the term hereof, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total man hours of effort specified above 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 fee together with an offer, setting forth a proposed level of effort, cost breakdown, and proposed 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.

(f) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total man 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.

(g) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the period of this contract, the Contracting Officer, at its sole discretion, shall either (i) reduce the fee of this contract as follows:

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Fee Reduction = Fee x ((Required LOE minus Expended LOE)divided by Required LOE)

or (ii) subject to the provisions of the clause of this contract entitled "LIMITATION OF COST" (FAR 52.232-20) or "LIMITATION OF COST (FACILITIES)" (FAR 52.232-21), as applicable, require the Contractor to continue to perform the work until the total number of man hours of direct labor specified in paragraph (a) above shall have been expended, at no increase in the fee of this contract.

(h) The Contractor shall provide and maintain an accounting system, acceptable to the Administrative Contracting Officer and the Defense Contract Audit Agency (DCAA), which collects costs incurred and effort (compensated and uncompensated, if any) provided in fulfillment of the level of effort obligations of this contract. The Contractor shall indicate on each invoice the total level of effort claimed during the period covered by the invoice, separately identifying compensated effort and uncompensated effort, if any.

(i) Within 45 days after completion of the work under each separately identified period of performance hereunder, the Contractor shall submit the following information in writing to the Contracting Officer with copies to the cognizant Contract Administration Office and to the DCAA office to which vouchers are submitted: (1) the total number of man hours of direct labor expended during the applicable period; (2) a breakdown of this total showing the number of man hours expended in each direct labor classification and associated direct and indirect costs; (3) a breakdown of other costs incurred; and (4) the Contractor's estimate of the total allowable cost incurred under the contract for the period. Within 45 days after completion of the work under the contract, the Contractor shall submit, in addition, in the case of a cost underrun; (5) the amount by which the estimated cost of this contract may be reduced to recover excess funds and, in the case of an underrun in hours specified as the total level of effort; and (6) a calculation of the appropriate fee reduction in accordance with this clause. All submissions shall include subcontractor information.

(j) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish man hours up to five percent in excess of the total man 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 fee is required.

(End of Clause)

SEA 5252.232-9104 ALLOTMENT OF FUNDS (MAY 1993)

(a) This contract is incrementally funded with respect to both cost and fee. The amount(s) presently available and allotted to this contract for payment of fee for incrementally funded contract line item number/contract subline item number (CLIN/SLIN), subject to the clause entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE" (FAR 52.216-10), as appropriate, is specified below. The amount(s) presently available and allotted to this contract for payment of cost for incrementally funded CLINs/SLINs is set forth below. As provided in the clause of this contract entitled "LIMITATION OF FUNDS" (FAR 52.232-22), the CLINs/SLINs covered thereby, and the period of performance for which it is estimated the allotted amount(s) will cover are as follows:

| ESTIMATED ITEM(S) PERFORMANCE | ALLOTED TO COST | ALLOTED TO FEE | PERIOD OF |
|---|-----------------|----------------|--------------------------------|
| 100001 Through 100004 300001-300002 | \$ [REDACTED] | \$ [REDACTED] | 31 March 2008 31 March 2008 |

(b) The parties contemplate that the Government will allot additional amounts to this contract from time to time for the incrementally funded CLINs/SLINs by unilateral contract modification, and any such modification shall state separately the amount(s) allotted for cost, the amount(s) allotted for fee, the CLINs/SLINs covered thereby, and the period of performance which the amount(s) are expected to cover.

(c) CLINs/SLINs are fully funded and performance under these CLINs/SLINs is subject to the clause of this contract entitled "LIMITATION OF COST" (FAR 52.232-20) or "LIMITATION OF COST (FACILITIES)" (FAR 52.232-21), as applicable.

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(d) The Contractor shall segregate costs for the performance of incrementally funded CLINs/SLINs from the from the costs of performance of fully funded CLINs/SLINs.

Accounting Data

| SLINID | PR Number | Amount |
|---|-----------|------------|
| 100001 | 72571369 | [REDACTED] |
| LIA : | | |
| AA 97X4930.NH1C.000 77777 0 000 167000 2F 000000 071914580752 | | |
| 100002 | 72571514 | [REDACTED] |
| LIA : | | |
| AB 97X4930.NH1C.000 77777 0 000167 2F 000000 071914440152 \$ [REDACTED] | | |
| 100003 | 72571465 | [REDACTED] |
| LIA : | | |
| AC 97X4930.NH1C 000 77777 0 000167 2F 000000 071914580720 \$ [REDACTED] | | |
| 100004 | 72571463 | [REDACTED] |
| LIA : | | |
| AD 97X4930.NH1C 000 77777 0 000167 2F 000000 \$071914580799 \$ [REDACTED] | | |
| 300001 | 72571460 | [REDACTED] |
| LIA : | | |
| AE 97X4930.NH1C 000 77777 0 000167 2F 000000 071914580761 \$ [REDACTED] | | |
| 300002 | 72571542 | [REDACTED] |
| LIA : | | |
| AF 1721711 A224 252 X8WMW 0 068342 2D 000000 231669004A3F \$ [REDACTED] | | |
| Standard Number: N0002407WX21602 AA | | |

SECTION H SPECIAL CONTRACT REQUIREMENTS

H-01 NOTIFICATION CONCERNING DETERMINATION OF SMALL BUSINESS SIZE STATUS

For the purposes of FAR clauses 52.219-6, NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE, 52.219-3, NOTICE OF TOTAL HUBZONE SET-ASIDE, 52.219-18, NOTIFICATION OF COMPETITION LIMITED TO ELIGIBLE 8(A) CONCERNS, and 52.219-27 NOTICE OF TOTAL SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS SET-ASIDE, the determination of whether a small business concern is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation, and further, meets the definition of a HUBZone small business concern, a small business concern certified by the SBA for participation in the SBA's 8(a) program, or a service disabled veteran-owned small business concern, as applicable, shall be based on the status of said concern at the time of award of the SeaPort-e MACs and as further determined in accordance with Special Contract Requirement H-19.

CAR-H09 Performance-Based Acquisition Evaluation Procedures for a SeaPort e Task Order (MAR 2006) (NSWCCD)

(a) Introduction: The contractor's performance on this task order will be evaluated by the Government, in accordance with this task order clause. The first evaluation will cover the period ending twelve months after the date of task order award with successive evaluations being performed for each twelve-month period thereafter until the contractor completes performance under the task order. Based on the evaluation results, the PCO will assign an overall performance rating in accordance with paragraph (b) of this clause. The purpose of the evaluation is to determine remedies that may be invoked due to "Unsatisfactory" performance. If the PCO assigns an "Unsatisfactory" performance rating for the period evaluated, the PCO may take unilateral action, in accordance with clause 52.246-5 entitled "Inspection of Services-Cost Reimbursement", dated Apr 1984, in Section E of the base contract, to provide for a fee reduction covering the performance period evaluated. This clause provides the basis for evaluation of the contractor's performance and for determining if the fee amount should be reduced due to "Unsatisfactory" performance.

(b) Performance Ratings: The Government will evaluate the contractor's performance of the Statement of Work under the task order for each twelve month period of performance, using the measurable performance standards set forth in the Performance Requirements Summary Table in the SOW, or elsewhere in the task order, and the PCO will assign one of the following ratings:

- (1) Excellent
- (2) Very Good
- (3) Satisfactory
- (4) Unsatisfactory

The standards associated with these ratings are given in the following Table 1.

Table 1: Overall Performance Ratings

For The Evaluation Period

| Overall Performance Rating | Standard |
|----------------------------|--|
| Excellent | "Excellent" ratings for all performance evaluation criteria. |

| | | |
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|----------------|--|
| Very Good | A combination of “Excellent” and “Satisfactory” ratings determined by the PCO to exceed Satisfactory” overall. |
| Satisfactory | A minimum of “Satisfactory” ratings for all performance evaluation criteria. |
| Unsatisfactory | A rating of “Unsatisfactory” for one or more performance evaluation criteria. |

(c) Evaluation Objective: The purpose of the evaluation and the inclusion of a remedy to the Government for unsatisfactory contractor performance under this task order is to ensure that the Government receives at least “Satisfactory” overall performance.

(d) Performance Evaluation Criteria: The contractor’s performance will be evaluated on an annual basis using the criteria and standards provided for each task objective in the Performance Requirements Summary Table, and considering the criterion in Tables 2 through 4 of this task order clause.

(e) Organization: The performance evaluation organization consists of the Procuring Contracting Officer (PCO), who will serve as the Evaluation Official, and the Task Order Manager (ToM).

(1) ToM: The ToM will provide ongoing performance monitoring, evaluate task performance based on the task order Performance Requirements Summary, prepare the evaluation report, including a recommended overall performance rating, and submit the report to the PCO for final decision within thirty days after the end of the evaluation period. The ToM will maintain the written records of the contractor’s performance so that a fair and accurate evaluation is made.

(2) Procuring Contracting Officer (PCO): The PCO is responsible for properly administering the performance evaluation process, maintaining the official performance evaluation file, and making the decision about the overall performance rating and whether to reduce the fee if performance is rated as unsatisfactory.

(f) Evaluation Schedule: Each performance evaluation will cover the previous twelve months of performance. The Government will evaluate all work under the task order performed by the contractor during the twelve-month period. Following each evaluation period, the PCO (or Contract Specialist if so designated by the PCO) and the ToM will hold a meeting with the contractor’s Senior Technical Representative to review performance under the task order during the previous twelve months, including overall trends, specific problem areas, if any, and their resolution. Other Government and contractor personnel may also participate as deemed appropriate.

(g) Contractor’s Self-Evaluation: The contractor may also submit a Self-Evaluation Report for consideration. The report must include an overall performance rating for the task order, covering the evaluation period, and may include whatever information the contractor deems relevant to support that rating. The report shall not exceed two (2) pages in length.

(h) Performance Evaluation: The PCO will make the decision on the overall performance rating for the work performed under the task order within thirty days after receipt of the evaluation report from the ToM. The decision will be based upon the ToM’s recommendations, the contractor’s comments, including any Self-Evaluation Report, and any other information deemed relevant by the PCO. The PCO shall resolve disagreements between the ToM’s recommendations and the contractor’s comments/report regarding the evaluation. The PCO will provide a copy of the evaluation report, including the overall rating, to the contractor within five working days after completion of the evaluation.

(i) Contractor’s Review of the Evaluation Report: Contractors shall be given a minimum of 15 calendar days to submit comments, rebut statements, or provide additional information. The PCO shall consider the contractor’s submission and respond as appropriate. Although the PCO will consider the contractor’s comments, rebuttals, or additional information, the PCO may, or may not, change the overall rating. The decision to change the rating based on contractor input at this stage is solely at the discretion of the PCO.

(j) This performance evaluation does not replace any other requirement for evaluating contractor performance that may be required by the base contract, such as a Contractor Performance Assessment Reporting System (CPARS) report, or a Task Order Performance Evaluation (TOPE).

TABLE 2: TASK PERFORMANCE EVALUATION CRITERIA AND STANDARDS

| Criterion | UNSATISFACTORY | SATISFACTORY | EXCELLENT |
|-----------------------|---|--|--|
| Task Performance | Work product fails to meet Acceptable Quality Levels (AQLs) defined in Performance Requirements Summary Table (see SOW or elsewhere in the Task Order). | Work product routinely meets Acceptable Quality Levels (AQLs) defined in Performance Requirements Summary Table(see SOW or elsewhere in the Task Order). | Work product frequently exceeds Acceptable Quality Levels (AQLs) defined in Performance Requirements Summary Table (see SOW or elsewhere in the Task Order). |
| Staffing | Contractor provides marginally qualified or unqualified personnel. Lapses in coverage occur regularly. | Contractor provides qualified personnel. Lapses in coverage may occasionally occur and are managed per individual task order policy. | Contractor provides highly qualified personnel. Contractor reassigns personnel to ensure proper coverage. Actual lapses in coverage occur very rarely, if ever, and are managed per individual task order policy. Contractor ensures staff training remains current. |
| Timeliness | Contractor frequently misses deadlines, schedules, or is slow to respond to government requests or is non-responsive to government requests. | Contractor routinely meets deadlines, schedules, and responds quickly to government requests. | Contractor always meets deadlines, schedules, and responds immediately to government requests. |
| Customer Satisfaction | Fails to meet customer expectations | Meets customer expectations. | Exceeds customer expectations. |

TABLE 3: CONTRACT MANAGEMENT PERFORMANCE EVALUATION CRITERIA AND STANDARDS

| CRITERION | UNSATISFACTORY | SATISFACTORY | EXCELLENT |
|--------------------|--|--|--|
| Problem Resolution | Problems are unresolved, repetitive, or take excessive government effort to resolve. | Problems are resolved quickly with minimal government involvement. | Problems are non-existent or the contractor takes corrective action without government involvement. |
| Responsiveness | Contractor's management is unresponsive to government requests and concerns. | Contractor's management is responsive to government requests and concerns. | Contractor's management takes proactive approach in dealing with government representatives and anticipates Government concerns. |
| Communications | Contractor often fails to communicate with government in an effective and timely manner. | Contractor routinely communicates with government in an effective and timely manner. | Contractor takes a proactive approach such that communications are almost always clear, effective, and timely. |

TABLE 4: COST EFFICIENCY PERFORMANCE EVALUATION CRITERIA AND STANDARDS

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| CRITERION | UNSATISFACTORY | SATISFACTORY | EXCELLENT |
|----------------|--|---|---|
| CostManagement | Contractor routinely fails to complete the effort within the originally agreed to estimated cost, i.e. cost overruns frequently occur. | Contractor routinely completes the effort within the originally agreed to estimated cost. Contractor provides measures for controlling all costs at estimated costs. Funds and resources are generally used in a cost-effective manner. No major resource management problems are apparent. | Reductions in direct costs to the Government below contract estimated costs are noteworthy. Contractor provides detailed cost analysis and recommendations to Government for resolution of problems identified. Funds and resources are optimally used to provide the maximum benefit for the funds and resources available. Documented savings are apparent. |
| CostReporting | Reports are generally late, inaccurate incomplete or unclear. | Reports are timely, accurate, complete and clearly written. Problems and/or trends are addressed, and an analysis is also submitted. | Reports are clear, accurate, and pro-active. Problems and/or trends are addressed thoroughly, and the contractor's recommendations and/or corrective plans are implemented and effective. |

See Attachment CAR-H10 PERFORMANCE REQUIREMENTS SUMMARY TABLE

H-5 TASK ORDER PROCESS

J. Ombudsman Description. In accordance with FAR 16.505(a)(7), no protest under FAR Subpart 33.1 is authorized in connection with PCO decisions regarding fair opportunity or the issuance of a TO under this contract, except for a protest on the grounds that a TO increases the scope, period, or maximum value of the contract. The Local Warfare Center Site Deputy for Small Business has been designated as the NAVSEA and related Program Executive Offices Ombudsman for this contract. The NAVSEA Ombudsman will review complaints from the contractors and ensure that all contractors are afforded a fair opportunity to be considered, consistent with the procedures in the contract. Complaints to the NAVSEA Ombudsman must be forwarded to:

Mr. Ted Ptashkin

215-897-7596

theodore.ptashkin@navy.mil

Clause HQ C-2-0037 "Organizational Conflict of Interest" (NAVSEA) (JUL 2000) is hereby invoked in accordance with the Basic Contract.

Option to Extend Services

The Government may require continued performance of any services within the limits and at the rates specified in the Task Order. 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

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10 days prior to Task Order end date.

(End of Clause)

Option to Extend the Term of the Task Order

(a) The Government may extend the term of this task order under option CLINs/SUBCLINs by written notice to the Contractor on or before 4 Apr 2009; provided, that the Government gives the Contractor a preliminary written notice of its intent to exercise the option(s) at least thirty days before the task order expires. The preliminary notice does not commit the Government to an extension.

(b) The total duration of this task order, including the exercise of any options under this clause, shall not exceed five years.

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SECTION I CONTRACT CLAUSES

CAR-I18 TECHNICAL INSTRUCTIONS (DEC 2001)

(a) Performance of the work hereunder may be subject to written technical instructions signed by the Task Order Manager. As used herein, technical instructions are defined to include the following:

(1) Directions to the Contractor that suggest pursuit of certain lines of inquiry, shift work emphasis, fill in details or otherwise serve to accomplish the statement of work.

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

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

(1) assign additional work under the task order;

(2) direct a change as defined in the "Changes" clause of the base contract;

(3) increase or decrease the contract price or estimated amount (including fee), as applicable,

the level of effort, or the time required for task order performance; or

(4) change any of the terms, conditions or specifications of the task order.

(c) If, in the opinion of the Contractor, any technical instruction calls for effort outside the scope of the task order

or is inconsistent with this requirement, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after the receipt of any such instruction. The Contractor shall not proceed with the work affected by the technical instruction unless and until the Contracting Officer notifies the Contractor that the technical instruction is within the scope of this task order.

(d) Nothing in the paragraph (c) of this clause shall be construed to excuse the Contractor from performing that portion of the task order statement of work which is not affected by the disputed technical instruction.

(End of Clause)

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SECTION J LIST OF ATTACHMENTS

CAR H10

Include Attachment DDG-1000 Smart Valve POA&M