Code 15
Towed Array Handling Equipment Facility (TAHEF) Operations

Pre-Solicitation Conference

NUWC Division Newport
Undersea Collaboration & Technology Outreach Center (UCTOC)
May 20, 2014

Distribution Statement A: Approved for public release; distribution is unlimited.
Agenda

• Introduction/Ground Rules
• Disclaimer Statement
• Anticipated Procurement Strategy
• Technical Requirements
• Conclusion/Wrap-up
• Facility Tour
Introduction/Ground rules

• Introduction of NUWCDIVNPT Participants
• Intent of this Pre-Solicitation Conference
  • Encourage competition by:
    – Providing technical information to provide potential offerors a better understanding of the technical requirements
      • For Prime and Subcontracting opportunities
    – Ensure all potential offerors receive, and have access to, the same information
• Technical “Q&A” is encouraged
  – Q&A will be answered, either today or via SeaPort-e Portal
  – No questions about incumbent contractor

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Introduction/Ground rules (cont.)

• All attendees recommended to sign-in (this is voluntary)
• Please silence cell phones and pagers
• No personal recording
• Q&A will be recorded, typed, and posted to the SeaPort-e Portal
• This briefing and the attendees list will be posted to the SeaPort-e Portal, and via SENEDIA, NCMA and AFCEA distribution
• DO NOT directly contact NUWC technical code after today - all further dialogue will be accomplished via the Q&A feature on the SeaPort-e Portal
• Technical requirements contained in this briefing are presented as a summary
  – Full/Updated Technical Requirements will be provided in the Request for Proposal (RFP)

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Remarks today by Government officials involved in the Code 15 TAHEF Operations requirement should not be considered a guarantee of the Government’s course of action in proceeding with the acquisition.

The informational briefing shared today reflects current Government intentions and is subject to change based on a variety of circumstances.

The formal solicitation, when issued, is the only document that should be relied upon in determining the Government’s requirements.
Anticipated Procurement Strategy

• This is a follow-on of NUWCDIVNPT requirement N00178-04-D-4018 N408
  – Single Offeror
  – BAE
• SeaPort-e Task Order, Zone 1, Northeast
  – Prime
  – Sub
• Five (5) year Period of Performance
  – Base year plus 4 option years
• Full and Open Competition (Unrestricted)
• Contract LOE: 308,165 hrs. - CPFF / FFP
• Organizational Conflict of Interest (OCOI) Clause Applies
• Clearance Level: Secret
Anticipated Procurement Strategy (cont.)

• Other Direct Costs (ODC’s) will be less than 10% of total cost

• Estimated Schedule:
  – RFP Release: Sept 2014
  – Proposals Due: 40 days after RFP release
  – Award Date: Dec 2014

• Work Locations
  – 100% Government-site
    • Travel
      – Vendor site visits
      – Program related meetings

• Facilities
  – Government will provide facilities for on-site personnel
  – Facility Security Clearance Required: Secret
  – Government Furnished Materials/Equipment/Information (GFM/E/I)
    • Provided in Solicitation and upon award of contract
Requirements

• Hazardous Materials (HAZMAT) and Safety
  – Track all hazardous materials at the TAHEF in accordance with NUWCDIVNPT and OSHA requirements
  – Maintain a safety program to support TAHEF operations
    • Energy Control (Lock Out/Tag Out) Program
    • Hazardous Material Control Program

• Training
  – Create and maintain a technician training and certification program
  – Create and maintain a matrix detailing the specific training credentials of each employee
  – Update the training matrix each time technician personnel change or acquire new certifications

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Technical Requirements
Code 15 Organization

15 Sensors & SONAR Systems Department Head
15A Deputy Department Head
15S Administrative Assistant

1501 Director, Business Operations
15B Director, Strategy & Special Projects
15T Director, Science & Technology
159 Director, Programs & Contracts
15A Customer Advocacy
15E Director, Engineering
15A Information Technology

151 Science and Technology Division
152 Advanced Concepts Division
153 Sensors and Arrays Division
154 Submarine and Surveillance Systems Division
155 Surface Ship and Aviation Systems Division

1511 Automation Algorithm Development
1512 Devices, Sensors and Materials R&D
1513 Signal Processing Algorithm Development
1521 Developmental Systems Engineering
1522 Prototype Development
1523 Technology Integration
1524 Concepts and Experimentation
1531 Underwater Sound Reference
1532 Towed and Deployed Arrays Engineering
1533 Hull Arrays and Distributed Sensors Engineering
1534 Handling Systems Engineering
1535 Fleet Sensors and Cables Engineering
1541 Submarine and Surveillance Systems Engineering
1542 Passive Systems Engineering
1543 Submarine and Surveillance Systems Integration
1544 Submarine and Surveillance Test, Evaluation and Analysis
1545 Submarine and Surveillance Training, Logistics and Fleet Support
1551 Surface and Aviation Systems Engineering
1552 Active Systems Engineering
1553 Surface and Aviation Systems Integration
1554 Surface and Aviation Test, Evaluation and Analysis
1555 Surface and Aviation Training, Logistics and Fleet Support

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Towed Array Handling Equipment Facility

- Located at the Naval Station Newport, RI
- NUWCDIVNPT Sensors and SONAR Systems Department, Code 15
- 30,000 FT² Industrial and Office facility
- NAVSEA Certified Designated Overhaul Point for Submarine Towed Array Handling Equipment
- Operations are conducted in accordance with the policies and practices established in the TAHEF Quality Management Plan NUWCNPT Technical Document 11,249
- ISO 9001-2008 Registered

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Towed Array Handling Equipment Facility

• Towed Array Handling Systems
  o OA-9070A/B/E/BQQ Deployable Array Working Group
  o OK-542/A/BQ Thinline Towed Array Handling Equipment
  o OK-276A/B/C/T/BQ & OK-418/BQ Reelable Towed Array Handling Systems
  o OK-634/BSY Towed Array Handling and Stowage Group
  o OK-410(V) Handling and Stowage Group

• Customers
  o Naval Supply System
  o Naval Sea Systems Command
  o Portsmouth Naval Shipyard
  o Norfolk Naval Shipyard
  o Pearl Harbor Naval Shipyard
  o Puget Sound Naval Shipyard

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• Major Overhaul, Refurbishment, Test and Evaluation Products
  o Hydraulic Control Units
  o Cable Drive Units
  o Hydraulic Motors, Valves and Locks
  o Control & Indicator Units
  o Universal & Electro-optical Slip Ring Assemblies
  o Outboard Sensor Assemblies
  o Pinch Roller Assemblies
  o OK-410 Winch Systems
  o OK-542 Capstan Units
  o OK-542 Stowage Drum/Levelwind Units

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Towed Array Handling Equipment Facility

Technical Requirements

➢ Operations of the TAHEF

› Operate Material Handling Equipment (Government Furnished Equipment (GFE)) to move products into, within and out of the Facility
› Overhaul, Test and Prepare Towed Array Handling Systems (TAHS), Towed Array Handling Equipment (TAHE) and components for Certification
› Design, develop and fabricate special purpose tools, fixtures and test equipment
› Test proposed and developmental TAHS, TAHE and components to be installed on ships and submarines
› Apply software upgrades related to the operation and maintenance of special tools and test equipment used in the TAHEF
› Perform failure analysis and failure analysis reporting
Support Tasks

› Operating Material and Supplies (OM&S)
  • Maintain OM&S records in Enterprise Resource Planning (ERP) to ensure accurate material status for all TAHEF inventory

› Integrated Logistics Support (ILS)
  • Support production control, scheduling, packaging, handling and storage and preparation for shipping
  • Use TAHEF Web-Based Tools & Software to track and control logistics data items
  • Maintain a repository for logistics documentation
  • Provide product quality and supplier performance data in accordance with Product Data Reporting and Evaluation Process (PDREP)
Support Tasks (cont.)

› Configuration Management
  • Database Maintenance
    o Maintain Databases to track Configuration Data Items and documentation versions
      - Data Base entries are considered maintaining the Data Base
  • Document Control
    o Maintain a Technical Publications Library
    o Generate, distribute and provide proper storage, retrieval and disposal of Technical Documentation

› Quality Control
  • Operate and maintain a quality control program in accordance with the requirements of ISO 9001-2008 Quality Standards and the TAHEF Quality Management Plan
  • Review processes and provide recommendations for improvements
Support Tasks (cont.)

› Calibration and Handling Equipment Control
  • Track all calibration required test and measurement equipment in accordance with NUWCDIVNPT METCAL Program requirements
  • Track all handling equipment certification in accordance with NUWCDIVNPT safety and handling equipment
Support Tasks (cont.)

- Equipment Maintenance and Upgrades
  - Maintenance
    - Maintain all equipment and tools in the facility
  - Upgrades and Modernization
    - Implement upgrades and improvements. This includes design, fabrication, layout, installation and verification of functional operation of the upgraded equipment
Towed Array Handling Equipment Facility
OK-276 Test & Integration Equipment

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Towed Array Handling Equipment Facility

OK-542 Test & Integration Equipment

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Towed Array Handling Equipment Facility

Universal Test Stand (UTS)

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Towed Array Handling Equipment Facility

Universal Test Stand (UTS) LRU Test Capability

Universal Motor Test Stand (UMTS) and Universal Valve Test Stand (UVTS)

Dynamic Performance Testing of Hydraulic Motors to 45 GPM and 8,300 ft-lbs Torque

Dynamic Performance Testing of Hydraulic Valves to 45 GPM

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Towed Array Handling Equipment Facility

Universal Test Stand Facility Power Units

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Towed Array Handling Equipment Facility
Universal Motor Test Stand (UMTS)

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Towed Array Handling Equipment Facility
Universal Motor Test Stand (UMTS)

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• UMTS
  • Circuit control manifold utilizes hydraulic proportional valves to control flow and pressure
    o Unit Under Test (UUT) inlet and outlet pressure adjustment
    o Hydraulic motor UUT - hydrodynamic brake test capability
    o Combine motor with circuit control valve for dynamic test inspection
  • Product vertical mount expedites installation
    o Pilot positioning fixtures – designed for customer unique UUT interface
    o Drive insert fixtures – quickly adapts test product to UMTS
Towed Array Handling Equipment Facility
Universal Valve Test Stand (UVTS)
Towed Array Handling Equipment Facility
Universal Valve Test Stand (UVTS)

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Towed Array Handling Equipment Facility
Universal Valve Test Stand (UVTS)

- UVTS
  - Breadboard design to facilitate product circuit setup and test
  - UUT Custom Test Manifolds
    - Test circuit cartridge valves
    - Top mounted test valve manifold block
  - UVTS circuit manifold utilizes hydraulic proportional valves to control oil direction, flow and supply pressure
  - Flow bench QD bulkheads
    - Manual and proportional backpressure control
    - Positive displacement flow meters
    - Main/Auxiliary supply and return bulkheads
    - Pressure transducers (RV protected), redundant point source panel mount gauges

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• Control Console
  o Labview user interface allows unique product acceptance test procedure development
  o Tailored program expedites production testing and engineering evaluation
  o Developed test procedures generate unique limits table
    o Prevents dynamic test variable entry which could exceed product maximum allowable working design parameters
  o Program defined product tests - variable ramping rates, standard waveforms and user defined complex waveform
  o Product report generation – optional selectable test data acquisition
    o Reports can be exported to Excel or Word file
Towed Array Handling Equipment Facility

TAHEF PRODUCTS

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Towed Array Handling Equipment Facility
Submarine Handling System Unit Overhauls
OK-542 Capstan Unit
Towed Array Handling Equipment Facility
Submarine Handling System Unit Overhauls
OK-542 Stowage Drum/Levelwind Unit
Towed Array Handling Equipment Facility

Submarine Handling System Unit Overhauls

OK-276 Cable Drive Units

OK-276 Cable Stowage Reel/Levelwind Units

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Towed Array Handling Equipment Facility

Submarine Handling System Unit Overhauls

Hydraulic Control Units

Control & Indicator Units
Towed Array Handling Equipment Facility

Surface Ship Handling System Refurbishments

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Towed Array Handling Equipment Facility

Lowest Repairable Unit Overhaul

Hydraulic Motors

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Towed Array Handling Equipment Facility

Lowest Repairable Unit Overhaul

Data Boxes

Hydraulic Locks  Hydraulic Valves  Pinch Rollers

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Towed Array Handling Equipment Facility

Lowest Repairable Unit Overhaul / Upgrade

Electro-optical Slip Ring Assemblies
Towed Array Handling Equipment Facility

Lowest Repairable Unit Overhaul / Production

Universal Slip Ring Assemblies

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Towed Array Handling Equipment Facility

Lowest Repairable Unit Overhaul / Production

Outboard Sensor Assemblies

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Conclusion/Wrap-up

• Thank you for your interest in the Code 15 Towed Array Handling Equipment Facility (TAHEF) Operations requirement

• Ensure that you are on the attendees list, or that your name is removed if you do not want to be on the list

• This briefing and the attendees list will be posted to the SeaPort-e Portal, and via SENEDIA, NCMA and AFCEA distribution

• “Q&A” (today’s and any subsequent), will be posted to the SeaPort-e Portal

• DO NOT contact today’s presenters
  – All further dialogue will be accomplished via the Q&A feature on the SeaPort-e Portal

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Facility Tour

• Unclassified Tour will be provide to groups of 20 people
• Tour will be scripted, no questions allowed during tour
• Follow-up Questions can be submitted to the SeaPort-e Portal

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