



Undersea Warfare Weapons, Vehicles, and Defensive Systems Department



Code 85 Propulsion Test Facilities (PTF) Operation and Maintenance Services Pre-Solicitation Conference



**NUWC Division Newport
Undersea Collaboration & Technology Outreach Center
(UCTOC)**

August 29, 2024



Agenda



- Introduction/Ground Rules
- Disclaimer Statement
- Department Overview
- Anticipated Procurement Strategy
- Facility/Capabilities Overview
- Contract Details
- Conclusion/Wrap-up



Introduction/Ground rules



- Introduction of 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
 - Please save questions until end of presentation.
 - Q&A will be answered, either today or via SeaPort NxG Portal
 - Q&A/Feedback Forms
 - No questions about incumbent contractor



Introduction/Ground rules



- Forms and receptacle are located at the Registration Table
- Please silence cell phones and pagers
- No personal recording
- The attendees list, Q&A and “Distribution Statement A” slides will be posted to the SeaPort-NxG portal and the Contracting & Office of Small Business Outreach page
 - Link: <https://www.navsea.navy.mil/Home/Warfare-Centers/NUWC-Newport/Partnerships/Contracting-and-Small-Business/Outreach-Events/>



Introduction/Ground rules



- DO NOT directly contact NUWC technical code after today – all further dialogue will be accomplished via the Q&A feature on the SeaPort-NxG portal
- Requirements contained in this briefing are presented as a summary

Full/updated requirements will be provided in the Requests for Proposal (RFP)



Disclaimer Statement



- Remarks today by Government officials involved in today's presentations should not be considered a guarantee of the Government's course of action in proceeding with any of the planned acquisitions discussed
- 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 N00178-19-D-8470/N66604-20-F-3003
 - Science Applications International Corporation (SAIC): Incumbent
- 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: 1,918,800 hrs. - CPFF
- Organizational Conflict of Interest (OCOI) Clause Applies
- Clearance Level: Secret
- CMMI Level III or equivalent
- Software Development Plan (SDP) and rational required
- Personnel certifications required for IT, HAZMAT, explosives, etc.



Anticipated Procurement Strategy (cont.)



- Other Direct Costs (ODC's) will be less than 45% of total cost
- Estimated Schedule:
 - RFP Release: Estimate November 2024
 - Proposals Due: 40 days after RFP release
 - Award Date: August 2025
- Work Locations
 - 60% Government-site
 - 40% Offsite
- 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

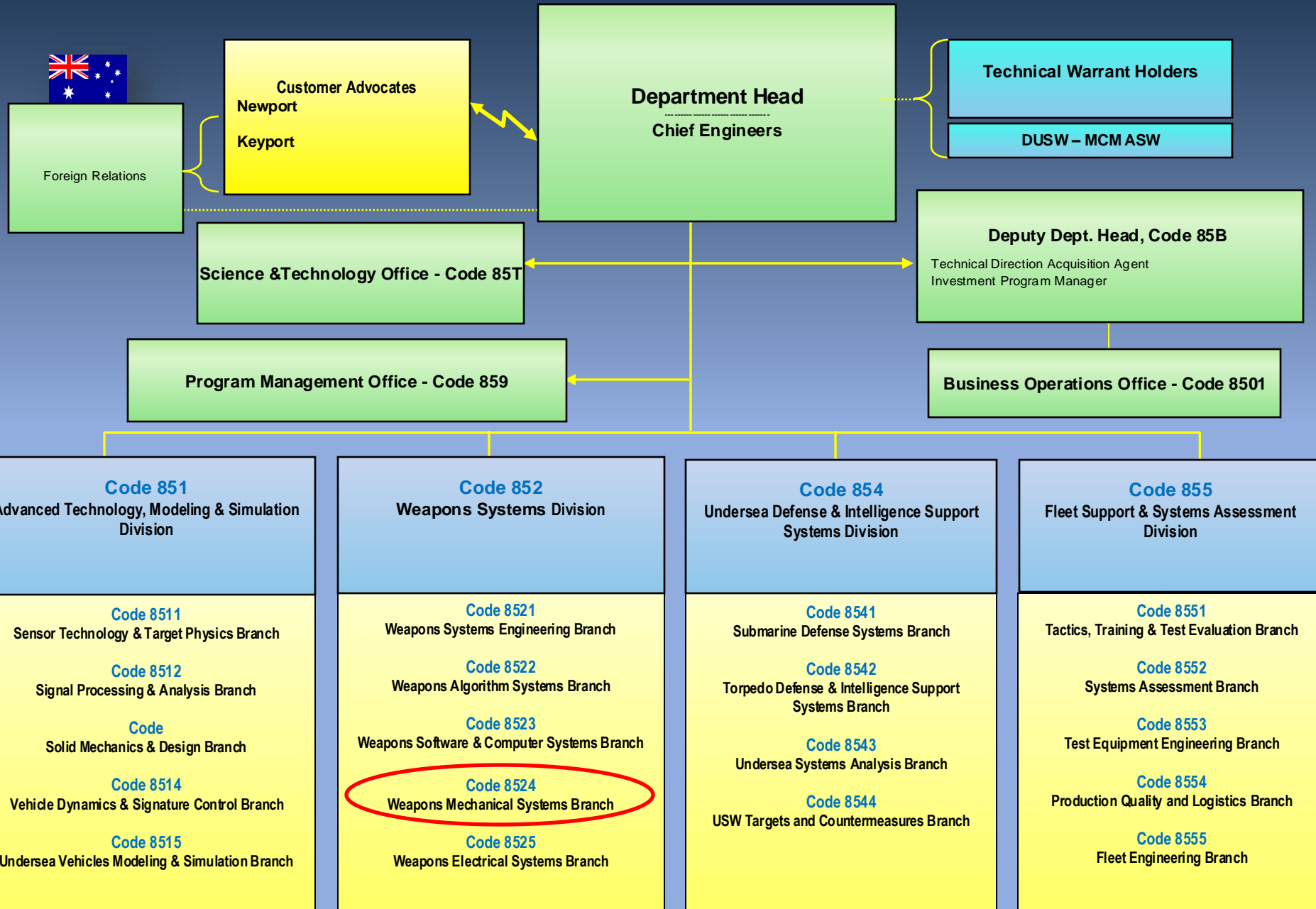


Propulsion Test Facility (PTF)



Technical Requirements & Overview

USW Weapons, Vehicles, and Defensive Systems Dept. ~ Code 85





Propulsion Test Facility (PTF)



- Customers
 - PMS 404 (US Undersea Weapons)
 - PMS 406 (Unmanned Maritime Systems)
 - ONR (Office of Naval Research)
 - NAVSUP (Naval Supply System)
 - DLA (Defense Logistics Agency)
 - DARPA (Defense Advanced Research Projects Agency)
 - NUWC
 - NSWC
 - Royal Australian Navy (RAN – Armaments Cooperative Agreement)
 - FMS (Foreign Military Sales)
 - Government Laboratories
 - University Laboratories
 - Private Industry

PTF Capabilities Overview

The Propulsion Test Facility is the premier facility of its type in the world.



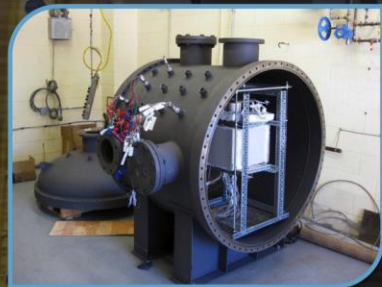
Remote Control Room

Open Cycle Test Facility

Supports land-based testing of undersea vehicles and components throughout full power and depth spectrums.

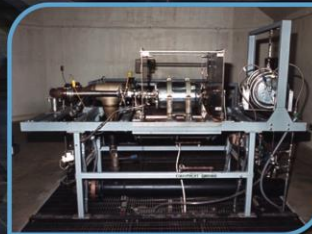


Component Test Facility



Provides testing capabilities to evaluate and advance the high power and high energy dense systems being developed for UUVs.

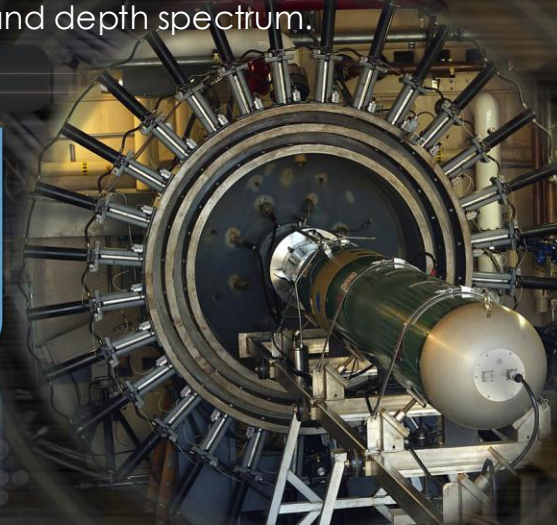
High Energy Chamber



Total containment structure used to support testing of closed cycle, high energy systems.

Deep Depth Test Facility

Provides testing of integrated undersea vehicle propulsion systems throughout their full power and depth spectrum.



PTF Safety Concerns

SAFE OPERATIONS ARE PARAMOUNT!





Safety Compliance



Selected open access documents (Distribution Statement A):

Title 29 Part 1910	Occupational Safety and Health Standards
Title 40 Part 260	Hazardous Waste Management System: General
Title 40 Part 261	Identification and Listing of Hazardous Waste
Title 40 Part 262	Standards Applicable to Generators of Hazardous Waste
Title 49 Part 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

The full document list is included in the Statement of Work



Safety Compliance



Selected restricted access documents (Distribution Statement D):

DoD 4145.26-M	DoD Contractors' Safety Manual for Ammunition and Explosives
NAVSEA OP 3199	Handling and Storage of Liquid Propellants
NAVSEA OP 4098	Handling Ammunition, Explosives and Hazardous Materials with Industrial Material Handling Equipment
NAVSEA OP 4461	On-Station Movement of Ammunition and Explosives by Truck and Railcar
NAVSEA OP 5	Ammunition and Explosive Safety Ashore Regulations for Handling, storing, Production, Renovation, and Shipping
OPNAVINST 5100.8G	Navy Safety and Occupational Safety and Health Program
OPNAVINST 5100.23G	Navy Occupational Safety and Health (NAVOSH) Program Manual
OPNAVINST 8020.14	Department of the Navy Explosives Safety Policy
OPNAVINST 8023.24C	Navy Personnel Conventional Ammunition and Explosive Handling Qualification and Certification Program
NUWC DIVNPTINST 5090.3D	Hazardous Material control Program
NUWC DIVNPTINST 5100.5B	Occupational Safety and Health (OSH) Program
NUWC DIVNPTINST 8015.1D	Conventional Ordnance Inventory Accountability
NUWC DIVPTINST 8020.4B	NUWC DIVNPT Explosive Safety Policies, Requirements, and Procedure manual
NUWC DIVPTINST 8020.9B	NUWC DIVNPT Conventional Ordnance/Explosive Handling Qualifications and Certification

The full document list is included in the Statement of Work



Propulsion Test Facility (PTF) Campus



- Located at Naval Undersea Warfare Center Division within Naval Station Newport, RI
- NUWCDIVNPT Undersea Weapons, Vehicles, and Defensive Systems Department, Code 85
- The PTF complex consists of multiple buildings
- This complex is the US Navy's only and-based facility for full system mechanical testing for torpedoes and other underwater systems



Current Efforts to be Continued Under Follow-On Contract



- Modernize all aspects of the PTF's business operations with a mission centric focus on:
 - Reliable service to our customers
 - Sustainable business practices
 - Identifying and exploiting efficiencies
- Modernize and equip the PTF's physical infrastructure while taking full advantage of business improvements to:
 - Increase safety
 - Enhance environmental responsibility
 - Build operational efficiency
 - Increase system resiliency



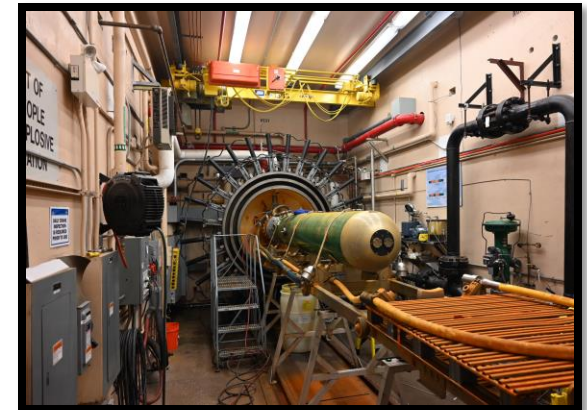


Campus Overview



Deep Depth Test Facility (DDTF)

- Built in the early 1960's
 - Significantly rebuilt in the late 1990's
- Houses PTF's principal capability which is unique in the free-world
- Integral to maintaining Navy Core-Equity
 - R&D, Production, Reliability and Maintainability
 - Data, Data, Data!!!
- Facility is aging...
 - Requires significant investment to maintain capability
 - Space is sub-optimal creating inefficiency and safety concerns
 - Limited space for future/emergent capabilities
- Multi-Year replacement effort commencing



Campus Overview cont.

Underwater Vehicle Signal Reduction Laboratory

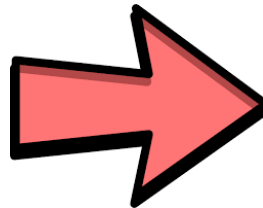
- Built in the 1990's
 - Houses many sub-systems supporting all testing
 - Houses Testing Systems
 - Combustion Test Stand
 - Drag Disk Test Stand
 - Accessories Test Stand
 - Conical Shock Tube
 - Hydraulic Press Test Stand
 - Additional support space
 - Home of 'Torpedo Alley'
- Issues to address:
 - Suboptimal test cell layout
 - Inefficient utilization of space
 - Reorganize with focus on efficient use of space



Campus Overview cont.

Control Room and Supporting Equipment

- Built in mid 1990's (largely unchanged to date)
- Supports most testing activities
- Goal:
 - Modernize using modern Control Systems and Human Systems Integration



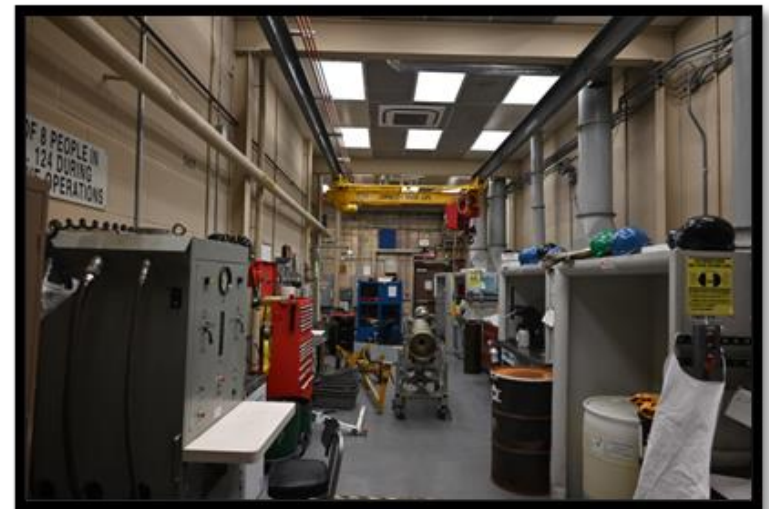


Campus Overview cont.



Torpedo Assembly and Integration Facility

- The Facility Supports
 - Torpedo Testing Activities
 - Torpedo Test-Set Development
 - Fleet Flushing Events
 - Structured Teardowns
 - SHAPES Program Support
- Issues
 - Inadequate Space (Increasing)
 - Sub-Optimal Layout
- Expansion Project Beginning - FY25





Campus Overview cont.



High Energy Chamber (HEC)

- Built in the early 1990's
 - Unique capability
 - Unused since the mid 2000's
- Two-part effort to revitalize
 - Physical infrastructure
 - Test system development



Propulsion Test Facility (PTF) Technical Requirements



Testing Services:

The Contractor shall perform testing services utilizing the capabilities of the Propulsion Test Facility (PTF), its various test systems, their sub-systems, and the support infrastructure of the PTF

- Prepare and review test planning documentation
- Prepare test item
- Integrate test item
- Keep test log
- Participate in drills
- Participate in process reviews
- Execute testing activities
- Restore all systems to pre-test condition
- Clean, disassemble, and analyze Unit Under Test (UUT)



Propulsion Test Facility (PTF) Technical Requirements cont.



Operational and Maintenance Services:

In accordance with applicable documents, the PTF TR System, and utilizing GFI, the Contractor shall provide services to operate and maintain the PTF

- Develop a routine maintenance plan
- Complete/maintain routine maintenance log
- Complete/maintain breakdown maintenance log
- Issue Review Board (IRB)
 - Draft Issues for review
 - Participate in IRB review process
 - Execute corrective actions
 - Prepare agenda / minutes
 - Execute Engineering Change Requests (ECR's)
 - Execute Actions
- Perform hazardous material handling and disposal



Propulsion Test Facility (PTF) Technical Requirements cont.



Operational and Maintenance Services cont.:

- Complete and maintain facility documentation
 - PTF Mechanical System Diagrams
 - Facility Piping and Instrumentation Diagrams (P&ID)
 - Electrical System Diagrams (ESD)
 - Testing and support systems
 - Standard Operating Procedures (SOP's)
- Manage instrumentation equipment
 - Maintain PTF Instrumentation Database
 - Alignment and calibration of instruments/systems
- Logistical services
 - Document control
 - Project/activity scheduling
 - Material Management
 - Procurement



Propulsion Test Facility (PTF) Technical Requirements cont.



Engineering and Technical Services

In accordance with the ADs, the PTF TR System, and utilizing GFI, the contractor shall perform Engineering and Technical Services (ETS).

- The Contractor shall perform Engineering and Technical Services (ETS) at the PTF Complex and the Contractor's facility
- Engineer upgrades to PTF in support of PTF Revitalization efforts
- Perform Torpedo Test Equipment services at Contractor facility
 - Fabricate Torpedo Test Equipment
 - Generate and deliver drawings, specifications and parts lists
 - Design, prototype, test, and document new Torpedo Test Equipment
 - Evaluate price and lead times
 - Manage software



Example of Test Sets Supported



- Heavyweight ATE MK 660 Mod 1
- Heavyweight ATE MK 660 Mod 2
- Cable Test Set Mk556 Mod 5
- Cable Test Set Mk556 Mod 6
- Cable Test Set Mk556 Mod 7
- Steering Assembly Test Set Mk 659 Mod 0
- Fuel Delivery Assembly Test Set Mk 658 Mod 1
- Flushing Stand MK 712 Mod 1
- Calibration Console MK 125 Mod 0
- Lightweight ATE Mk 695 Mod 0
- Lightweight ATE Mk 695 Mod 1
- Lightweight ATE Mk 695 Mod 2
- Exploder Test Set Mk 525 Mod 3
- Exploder Test Set Mk 525 Mod 4
- TFEE Mk 1 Mod 0
- TFEE Mk 1 Mod 1
- Otto Fuel Detector MK 15 Mod 0
- Speed Control Valve Test Set Mk 707 Mod 1
- Wirelink Interface Assembly Test Set
- Tuning Box Test Set
- Hydraulic Filling Unit MK5 Mod 0
- Otto Fuel Filling Unit MK6 Mod 0
- Depth Sensor Assembly Test Set
- Fuel Pump Test Set Mk 558 Mod 0
- Common Exercise Head Test Set MK 562 Mod 3
- Igniter Test Set



Propulsion Test Facility (PTF) Technical Requirements cont.



Engineering and Technical Services cont.:

- Engineering Design services
 - Design, model, draw, analyze, test and document mechanical and electrical systems/subsystems/components
 - Provide all Engineering Documentation to the Government
 - Develop, fabricate and test prototype systems/subsystems/components
- Systems Engineering services
 - Perform studies and document findings (e.g., technical studies, Analysis of Alternatives (AoAs), planning documents, engineering notebooks etc.)
 - Define and improve processes
 - Project management
 - Risk management
 - System Safety



Propulsion Test Facility (PTF) Technical Requirements cont.



Engineering and Technical Services cont.:

- Digital Engineering services
 - Model Based Systems Engineering (MBSE)
 - Develop / maintain comprehensive PTF systems model
 - Develop web applications and improvements
 - Provide workflow improvements
 - Perform database improvement, construction, and maintenance



Propulsion Test Facility (PTF) Technical Requirements cont.



Cyberspace/Cyber Workforce (CWF):

- Cyberspace qualifications
 - Security clearances
 - Earn and maintain baseline certifications
 - Obtain applicable operating system and computing environment training
- Cyberspace reporting
 - Provide list of personnel
 - Submit new hire information
 - Monthly reports
- PTF Software and IT Infrastructure
 - Maintain, update, and service all workstations, peripherals, databases, control, and instrumentation software
 - Maintain facilities ATO
 - Develop, update, and maintain PTF control and instrumentation software
 - Document with version and subversion notes, operating manuals and test plans



Conclusion/Wrap-up



- Thank you for your interest in the Code 85 Propulsion Test Facilities Operation and Maintenance Services Contract
- 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-NxG Portal [and the NUWC DIVNPT Electronic Reading Room](#)
- “Q&A” (today’s and any subsequent) will be posted to the SeaPort-NxG Portal
- DO NOT contact today’s presenters
 - All further dialogue will be accomplished via the Q&A feature on the SeaPort-NxG Portal



Facility Tour



- A Tour at the **UNCLASSIFIED** level will be provide to groups of up 20 people at a time
- Your company **MUST** have submitted a JPAS visitor request in order to attend the tour
- Tour will be scripted, no questions allowed during tour
- Follow-up Questions can be submitted to the SeaPort-NxG Portal