

Chapter 8 – Waterfront Engineering and Technical Authority

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References

- (a) SECNAVINST 5400.15C, DoN Research and Development, Acquisition, Associated Life-Cycle Management, and Logistics Responsibilities and Accountability
- (b) NAVSEANOTE 5400, Ser: TAB/008 dated 16 July 07, NAVSEA Technical Authorities
- (c) NAVSEAINST 5400.95D, Waterfront Engineering and Technical Authority Policy
- (d) NAVSEAINST 5400.97C, Virtual SYSCOM Engineering and Technical Authority Policy (Virtual SYSCOM Joint Instruction VS-JI-22A)
- (e) Federal Acquisition Regulations (FAR)
- (f) NAVSEAINST 9078.2, Naval Ships Critical Safety Item (CSI) Program Technical Requirements
- (g) NAVSEAINST 5000.8, Naval SYSCOM Risk Management Policy
- (h) Public Law 105-270, Federal Activities Inventory Program Act of 1998
- (i) OMB Circular No A-76 of May 2003
- (j) Operating Agreement between the COMNAVSEA and Affiliated PEOs of April 1997
- (k) Executive Order 12344, Naval Nuclear Propulsion Program
- (l) Joint Fleet Maintenance Manual
- (m) NAVSEAINST 4700.17A, Preparation and Review of Trouble Reports

Chapter 8 – Waterfront Engineering and Technical Authority

8.1 Introduction

In accordance with [SECNAVINST 5400.15C](#), reference (a), COMNAVSEA is responsible for serving as technical authority and operational safety and assurance certification authority for its assigned areas of responsibility. Those responsibilities are listed in enclosure (3) of that instruction and include all functional areas of NAVSEA and its affiliated PEOs, with the exception of responsibilities assigned to SEA 08. COMNAVSEA retains responsibility and technical authority for the design and construction of US Navy ships, submarines, submersibles, and other water craft, and their respective equipment and systems including their interface with other SYSCOM systems and equipment such as ship/aviation interfaces. The Naval Sea System Command (NAVSEA) organization and field activities provide direct technical support to the PEOs, DRPMs, Program Managers (PMs), and the Fleet Maintenance Officers (FMOs).

NAVSEANOTE 5400, Ser: TAB/008 dated 16 July 07, NAVSEA Technical Authorities, reference (b), identifies NAVSEA's technical authority chain of command, the 15 NAVSEA Deputy Warranting Officer (DWO) technical domains, Technical Authority Board (TAB) Membership and identifies Technical Authorities. The Deputy Commander, Naval Systems Engineering Directorate (NAVSEA 05), who is also the NAVSEA Chief Engineer (NAVSEA CHENG), is chairman of the NAVSEA Technical Authority Board. COMNAVSEA has delegated authority to NAVSEA 05/ NAVSEA CHENG, and no others, to select, appoint, and terminate appointments of Technical Warrant Holders (TWHs).

The responsibility, accountability, and authority of SUPSHIP and the assigned SUPSHIP Chief Engineer (SUPSHIP CHENG), and the exercise of that authority by their assigned activities, are addressed in relationship to NAVSEA 05. The exception is the authority resident with the Director, Naval Nuclear Propulsion Program (NAVSEA 08).

This chapter outlines the responsibility and reiterates the engineering, technical work, and technical authority policy for the SUPSHIPS as field activities under NAVSEA. The policy is stated in [NAVSEAINST 5400.95D](#), Waterfront Engineering and Technical Authority Policy, reference (c), and [NAVSEAINST 5400.97C](#), Virtual SYSCOM Engineering and Technical Authority Policy (Virtual SYSCOM Joint Instruction VS-JI-22A), reference (d).

8.1.1 Administrative Contracting Officer (ACO) and Technical Authority Warrant Responsibilities

SUPSHIPS perform contract administration and oversight of government acquisition contracts when delegated Administrative Contracting Officer (ACO) functions in accordance with Federal Acquisition Regulations (FAR), reference (e), [Part 42.302](#). This is addressed in Chapter 3.

The SUPSHIP CHENG and SUPSHIP Engineering Department are responsible for supporting the ACO and PM by providing oversight of the technical design, new construction, and repair products in accordance with the overarching contractual documents. This includes ship specifications, Drawing Approval Procedure (DAP), Total Ship Test Program (TSTP) or Master Plan for Ships Testing (MPST), and the Comprehensive Test Plan (CTP).

With respect to contract oversight, the responsibilities delineated in [NAVSEAINST 5400.95D](#) for the SUPSHIP CHENG are executed along with the ACO responsibilities. The SUPSHIP CHENG must execute Technical Authority and provide technical support to SUPSHIP accomplishment of the ACO function. While these two major functions overlap, they have distinct governing requirements and regulations.

8.1.2 Role of SUPSHIP Engineers

Waterfront interface for SUPSHIP engineering personnel includes:

- a. oversight of the contractor's technical performance in compliance with the contract specifications
- b. resolution of technical issues on the waterfront
- c. oversight of the contractor's Technical Manual Quality Assurance Program
- d. technical support for the Engineering Change Proposal (ECP) procedures
- e. review of the contractor's test program, review/approval of design test procedures and changes, and assurance of compliance oversight during construction
- f. function as the technical authority for departures from specifications, waivers, and deviations
- g. evaluate the results of component and system testing and trials in support of the program management team
- h. assist the project management team in preparing for and participating in contractor trials and other events where members of the Board of Inspection and Survey (INSURV) are participating
- i. membership on Joint Test Groups (JTG)
- j. oversight of the assigned Planning Yards (PY)
- k. oversight of contractor facilities when required by contract
- l. oversight of the contractor's quality assurance management program for technical documents and data

- m. assignments in project engineering
- n. assistance with certifications and technical inspections
- o. analysis of the results of final acceptance testing

There are also other programmatic responsibilities assigned to the SUPSHIP that require engineering discipline participation. These include:

- p. specification review prior to award, including participation in Pre-Award Surveys
- q. review and approval of Contract Data Requirements List (CDRL) requirements applicable to engineering & design
- r. review detailed design drawings from the contractor or government agency
- s. technical support for environmental compliance issues
- t. technical support when required for programs such as Fly-by-Wire, DSS/SOC, and SUBSAFE
- u. technical assistance to support specific programmatic audits such as SUBSAFE, life support systems, etc.
- v. Critical Safety Item (CSI) source approval in accordance with [NAVSEAINST 9078.2](#), Naval Ships Critical Safety Item (CSI) Program Technical Requirements, reference (f)
- w. Participate on Integrated Process Teams (IPT) for Integrated Product and Process Development (IPPD) contracts

The unique responsibilities and scope of the technical authority of the SUPSHIP engineering staff and the requirement for proven proficiency in the engineering and naval architectural disciplines associated with the mission of the SUPSHIP require an adequately staffed department that is properly qualified, trained, and capable of performing the assigned functions while minimizing technical risk.

8.2 Naval SYSCOMS Technical Authority

Naval SYSCOM Engineering and Technical Authority Policy is provided in the Virtual SYSCOM Joint Instruction VS-JI-22A (also identified as [NAVSEAINST 5400.97C](#)). The following provides a brief introduction to Technical Authority and the authority and responsibility associated with the position as a Technical Warranted Holder (TWH).

- a. Technical authority is the authority, responsibility, and accountability to establish, monitor, and approve technical standards, tools, and processes in conformance to higher authority policy, requirements, architectures, and standards.

- b. The exercise of Technical Authority is a process that establishes and assures adherence to technical standards and policy, providing a range of technically acceptable alternatives with risk and value assessments that includes utilizing NAVSEAINST 5000.8, Naval SYSCOM Risk Management Policy, reference (g), to manage program and system safety risks.
- c. Technical authority is an inherently governmental function assigned to the Navy Commanders of the SYSCOMs by the Secretary of the Navy. The Commanders must develop responsible and programmatically independent technical authority processes.
- d. The SYSCOM Commanders formally warrant qualified individuals as independent technical authorities, entrusted and empowered to provide leadership and make technically sound engineering decisions within their warranted technical area, ensure integration with other technical areas, and perform their responsibilities with integrity and discipline.
- e. Consistent with [Public Law 105-270](#), Federal Activities Inventory Program Act of 1998, reference (h), and [OMB Circular No A-76](#) of May 2003, reference (i), a necessary ingredient of technical authority processes is a sufficient number of trained and experienced staff to perform the inherently governmental functions of contract administration and oversight. Although contracting authority is not normally a responsibility of our engineering community, this entity is an essential component of contract administration and oversight, and must be properly staffed to do so.

8.3 Accountability for Engineering and Technical Authority

8.3.1 Warranting Officer for Engineering and Technical Authority

The policy outlined in the Virtual SYSCOM Joint Instruction, [NAVSEAINST 5400.97C](#), designates the System Commanders (SYSCOMS) as the Warranting Officers for Engineering and Technical Authority. Accordingly, the Commander, Naval Sea Systems Command is the Warranting Officer for all NAVSEA activities. COMNAVSEA has delegated authority to NAVSEA 05 to sign and administer the NAVSEA Technical Authority Warrants.

8.3.2 Deputy Warranting Officer (DWO)

COMNAVSEA, in NAVSEANOTE 5400, designated the Group Directors in NAVSEA 05 as Deputy Warranting Officers accountable to NAVSEA 05/NAVSEA CHENG. The NAVSEA CHENG, supported by the DWOs, is accountable for warranting personnel in NAVSEA and field commands within the technical domain or warranted technical areas of the DWOs.

NAVSEA 05 exercises the authority and accountability for engineering and technical authority through a direct reporting relationship with the DWOs. The SUPSHIP CHENG and the NAVSEA 05 Field Representative Program (FRP) are direct reports to the DWO accountable for their respective Technical Domain. Additionally, refer to [NAVSEAINST 5400.95D](#), Waterfront Engineering and Technical Authority Policy. The duties and

responsibilities of the Deputy Warranting Officer are outlined in the Virtual SYSCOM Joint Instruction, [NAVSEA 5400.97C](#).

8.3.3 COMNAVSEA Technical Authority for Acquisition

In addition to the direction in the Virtual SYSCOM Joint Instruction, [SECNAVINST 5400.15C](#), the Operating Agreement between the COMNAVSEA and affiliated PEOs of April 1997, reference (j), specify that COMNAVSEA is the technical authority pertaining to acquisition of ships and ship systems.

8.3.4 NAVSEA Engineering

NAVSEASYSCOM is aligned through its warranting process to develop and employ consistent disciplined collaborative engineering processes that provide safe, reliable, effective, integrated, timely, and affordable products for the customer.

The engineering workforce is aligned by technical areas; its engineers are empowered and accountable to make disciplined technical decisions, consistent with their technical expertise. This alignment is essential to an agile, effective, and efficient engineering workforce.

The independence of technical authority is an essential aspect of the engineering community because it provides:

- a. constructive collaboration with programmatic authorities on technical work
- b. checks and balances necessary to ensure our products support the warfighter and meet the changing needs of the Navy

NAVSEA is responsible for ship design and resolution of technical issues that exceed the authority of the SUPSHIPs. SUPSHIP's role, as a field activity of NAVSEA, is the waterfront interface that supports the headquarters staff and ship's force in assuring that ships, submarines, and craft introduced to fleet comply with the technical specifications and are mission ready following Final Contract Trials.

8.3.5 Technical Authority for Naval Nuclear Propulsion

The Director of Naval Nuclear Propulsion Programs (NAVSEA 08) is the technical authority for nuclear propulsion plant systems, equipment, and facilities. As outlined in the NAVSEA Organization Manual, [Executive Order 12344](#), Naval Nuclear Propulsion Program, reference (k), outlines NAVSEA 08's responsibilities and authorities over all facilities and activities which comprise the Naval Nuclear Propulsion Program, including all technical and logistical matters related to naval nuclear responsibilities and propulsion.

Nothing in this manual supersedes or changes the above authorities. NAVSEA 08 shall be consulted concerning all matters related to Naval Nuclear Propulsion.

8.4 SUPSHIP CHENG Authority

8.4.1 General

The responsibility for primary ship design adequacy rests with the designated NAVSEA 05 Ship Design Manager (SDM) or NAVSEA 05 designated representative.

NAVSEA 05 delegates technical authority to the SUPSHIP CHENG, as a Technical Warrant Holder (TWH), as defined in [NAVSEAINST 5400.95D](#), [NAVSEA 5400.97C](#), and other NAVSEA documents based on technical competency, capability, and expertise.

The SUPSHIP CHENG is:

- a. administratively accountable to the Supervisor (see Chapter 1)
- b. technically accountable to the NAVSEA 05 Technical Warrant Holder for their technical domain, on an additional duty (ADDU) basis
- c. accountable to COMNAVSEA, as the Warranting Officer, for all engineering and technical authority

The SUPSHIP CHENG has access to the full technical resources and expertise of the NAVSEA Enterprise to resolve issues beyond the local capability and outside of the SUPSHIP's scope of authority and to coordinate resolution of technical issues that develop. This includes requesting additional assistance where resources are limited.

8.4.2 Responsibilities of the SUPSHIP CHENG

This section outlines the responsibilities of the SUPSHIP CHENG, both as a Technical Warrant Holder and as the senior manager in the SUPSHIP organization for waterfront engineering.

8.4.2.1 Technical Warrant Holder (TWH)

As the command's senior Technical Warrant Holder, the SUPSHIP CHENG is responsible and accountable for all engineering, technical work and technical decision-making accomplished by their assigned activities as defined by [NAVSEAINST 5400.95D](#). The SUPSHIP CHENG is also authorized technical authority as defined in the [Joint Fleet Maintenance Manual](#), reference (I). Ship and work period specific Memorandum of Agreements (MOAs) are issued to delineate agreements between the SUPSHIP CHENG and other activities involved in the construction, conversion, and refit or repair work.

TWHs may also serve in programmatic organizations to provide alignment in managing and leading technical efforts; however, they may not be employees of those project organizations.

Technical authority warrants do not circumvent TWHs' responsibilities to their operational chain of command. However, they do provide them with the authority and accountability to directly access the Deputy Warranting Officer and the Warranting Officer, without fear of administrative repercussion, for issues affecting technical performance, operational readiness, safety and adequacy of engineering disciplines, technical specialties, and manning levels under the SUPSHIP CHENG's control to meet the requirements of the Technical Authority Warrant.

The selection and responsibilities of the SUPSHIP CHENG as a TWH by the Deputy Warranting Officer shall be based on demonstration of sufficient proven ability in the following competencies to hold the warrant as outlined in the Virtual SYSCOM Engineering and Technical Authority Policy, [NAVSEA 5400.97C](#):

- a. setting technical standards
- b. possessing technical area expertise
- c. ensuring safe and reliable operations
- d. ensuring effective and efficient systems engineering
- e. providing judgment in making unbiased technical decisions
- f. providing stewardship of engineering and technical capabilities
- g. providing accountability and technical integrity

Additionally, the SUPSHIP CHENG is responsible for maintaining and nurturing the engineering and engineering supervisor/management team in support of the Technical Authority Warrant. Responsibilities include:

- 1) ensuring a critical skill set is available to support CAS requirements
- 2) validating an engineering skills training program
- 3) supervising the engineering supervisor/management training program
- 4) refreshing the work force
- 5) ensuring accession planning

8.4.2.2 SUPSHIP CHENG – Waterfront Engineering Manager

The SUPSHIP CHENG is a senior manager, reporting via the chain of command to the Supervisor. The SUPSHIP CHENG manages a cadre of engineers and engineering technicians who interface directly with the SUPSHIP project management teams,

contractors, and customers, as well as the Program Manager and NAVSEA 05 codes, as required in the areas identified in paragraph [8.1.2](#).

There is normally a group of engineering disciplines who provide matrix support to the waterfront projects to support emerging engineering issues and the contractor's engineering change proposals and non-conformities that result from the production process.

The responsibilities of the SUPSHIP CHENG for managing waterfront engineering include the following major tasks:

- a. Maintaining a matrix of the engineering work force, under the control of the SUPSHIP CHENG, sufficient in scope of engineering disciplines and technical specialties to support the overall program management organization and ACO by providing technical support and direction to meet the requirements of the Technical Authority Warrant.
- b. Assessing manning requirements to meet the requirements of the warrant in relation to the technical requirements of contracts.
- c. Conducting an annual Technical Authority Capability Assessment (TACA) and providing the TACA assessment to NAVSEA 05, the NAVSEA 05 Field Representative (when assigned), NAVSEA 04, and NAVSEA 04Z. The TACA will include recommendations for resolving deficiencies in engineering disciplines, technical specialties, or manning levels.
- d. Offering support and recommendations to future and existing ship designs and participate in the design process, including ship specification development and specification readings.
- e. Establishing an organization and process for adequate oversight where a contractor and government agency personnel are performing Planning Yard responsibilities.

8.5 Engineering and Technical Authority Assessments

Formal engineering and technical authority assessments will be conducted periodically by the Deputy Warranting Officer to verify the SUPSHIP CHENG and the SUPSHIP's execution of the requirements contained in various references cited in this chapter and to identify opportunities for improvement. This assessment is in addition to the annual TACA initiated by the SUPSHIP CHENG.

The SUPSHIP CHENG is responsible for addressing the findings of Deputy Warranting Officer's formal assessments and providing recommendations for resolving deficiencies in engineering disciplines, technical specialties, or manning levels. Responses will be addressed to NAVSEA 05, the NAVSEA 05 Field Representative (when assigned), NAVSEA 04, and NAVSEA 04Z.

The SUPSHIP CHENG, as directed in [NAVSEAINST 5400.95D](#), shall conduct performance assessments on ADDU personnel to whom they have delegated technical responsibilities and on their organizations.

8.6 Engineering Field Representatives

In accordance with [NAVSEAINST 5400.95D](#), Engineering Field Representatives (EFRs) may be assigned. The EFR concept of operations is provided by NAVSEA 05. The SUPSHIP CHENG shall provide timely notification to EFRs of all significant technical issues at their assigned activities. EFRs shall be NAVSEA 05 employees. Responsibilities, outlined in [NAVSEAINST 5400.95D](#), include:

- a. providing independent oversight of the exercise of technical authority
- b. evaluating and assessing implementation and compliance with NAVSEA technical requirements, standards, processes, and policies
- c. facilitating collaborative technical communications among the Navy technical community, Fleet Type Commanders, RMCs, Naval Shipyards, and other waterfront maintenance activities
- d. advising NAVSEA technical leadership and engineering management on significant technical issues and technical core equities
- e. providing on-scene assistance and independent oversight in support of Ship Design Managers (SDMs) and other TWHs
- f. reviewing and processing field activity trouble reports in accordance with [NAVSEAINST 4700.17A](#), Preparation and Review of Trouble Reports, reference (m)

8.7 SUPSHIP CHENG and SUPSHIP Ancillary Responsibilities

In addition to the responsibilities and accountability associated with ship construction, the SUPSHIPS are routinely assigned various programs for contract administration that require extensive effort by the SUPSHIP CHENG and the detailed involvement by personnel from the SUPSHIP's engineering group who operate under his management.

The additional programs include not only the accountability for engineering and technical authority, but also involve the necessity for observing certain aspects of the contractor's production effort as a component of the Government's responsibilities in providing oversight of the contractor's Quality Assurance Management System.

Examples include:

- a. cableway certifications

- b. DDG 51 Class Planning Yard
- c. NACE
- d. dry docks and transfer systems
- e. paint programs
- f. weight and moment control program
- g. Value Engineering Program
- h. input to the Human Capital Digital Dashboard (HCDD) website:
<https://maintenance.navsea.navy.mil/seaapps/etasn/main/main.asp> (requires registration)
- i. comply with “business rules” and MOAs applicable to ABS and Naval Vessel Rules
- j. participate as the SUPSHIP technical authority in the “Trouble Report” process as detailed in [NAVSEAINST 4700.17A](#)