DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
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IN REPLY TO

NAVSEAINST 1520.3B
Ser 04/002
5 Mar 04

NAVSEA INSTRUCTION 1520.3B

From: Commander, Naval Sea Systems Command

Subj: ENGINEERING DUTY OFFICER ENGINEERING AND MANAGEMENT PROGRAM FOR NAVAL SHIPYARDS

Ref: (a) NAVSEAINST 4700.8A
(b) NAVSEAINST 1520.2C
(c) NAVSEAINST 12338.1A
(d) BUPERSINST 1540.41A

Encl: 1 Prerequisite Assignments for Engineering Duty Officers in Career Paths Leading to Command of a Naval Shipyard

1. Purpose. To revise the Engineering Duty Officer (EDO) Engineering and Management Program for Naval Shipyards. This Program:

a. Codifies existing practice for assigning qualified officers to Naval Shipyards.

b. Implements direction from the NAVSEA Deputy Commander for Logistics Maintenance and Industrial Operations and input from the Naval Shipyard Board of Directors.

c. Establishes prerequisite assignments that must be completed prior to assuming command of a Naval Shipyard.

2. Cancellation. NAVSEAINST 1520.3A of 12 Aug 93. This is a major change to the basic instruction and should be read in its entirety.

3. Background

a. Reference (a) establishes explicit COMNAVSEA policies for successful execution of depot-level overhauls and availabilities. Paragraph 3b(7) of reference (a) states:

"NAVSEA Headquarters will direct a program within the EDO community to ensure that sufficient qualified officers are

0693-LD-103-0714

assigned to officer billets at Naval Shipyards…. The program will also include developing "experts" in ship overhaul matters."

b. In February 1988, the Chief of Naval Operations (CNO) tasked NAVSEA and the Space and Naval Warfare Systems Command (SPAWAR) to conduct a study of the Navy's needs for EDs. Section IV of this report stated the following with regard to Shipyard Commanders:

"Shipyard Commander: Experience as a Shipyard Department Head is required with a minimum of 6-10 years total shipyard or ship repair facility experience desired. For six of the eight shipyards which repair nuclear propulsion plants, submarine qualification is desired and a prior department head tour must have been performed in a nuclear yard. A technical master's degree is required because of the technical complexity of naval ships and systems and the shipyard's design responsibility on repair and modernization."

c. The Naval Shipyards have undergone significant restructuring and reorganization since the 1988 study referenced above. We now have four Naval Shipyards, vice eight in 1988, and all four are primarily engaged in work on nuclear powered submarines and/or nuclear powered aircraft carriers. From the present through 2010, the majority of the workload in each Naval Shipyard involves nuclear powered submarines.

4. Objective. The objective of the Engineering and Management Program is to build a cadre of Engineering Duty Officers experienced in complex nuclear warship overhaul and maintenance Specific goals are:

a. Revitalize and improve the capability of the EDO community to effectively manage technical, financial, quality, production, and civilian personnel aspects of naval shipyard operations. Inherent in this is the ability of EDs to support the Navy's SEA ENTERPRISE initiative through Process Re-engineering Efforts and Organizational Change in large organizations staffed by government civilians. In particular, the goal is to develop officers with sufficient hands-on

experience working in core billets in the Nuclear Production, Radiological Controls, and Nuclear Engineering and Planning Departments to demonstrate a firm grasp and understanding of the basic tenants of the Naval Nuclear Propulsion Program.

b. Integrate and complement, as applicable, the requirements of references (b) and (c) into shipyard operations.

c. Develop to the maximum extent possible, officers with experience working on both submarines and nuclear powered aircraft carriers. Officers desiring a career path leading to command of a Naval Shipyard should be detailed to provide experience in both submarines and aircraft carriers. It should be recognized that assignment at the commander (O-5) level as a submarine tender or Shore IMA/IMF/TRF Repair Officer, or CVN Chief Engineer are significant career milestones toward command of a Naval Shipyard. At shipyards where consolidation of Intermediate and Depot functions have occurred, there are O-5 billets involving waterfront leadership of primarily Intermediate level work, which provide equivalent responsibility of shore IMA's/IMF's.

d. Consistent with reference (d), recognize the EDO (Nuclear) Program and the career path of EDO(N) Officers leading to assignment as CVN Reactor Officer and subsequent assignment as Naval Shipyard Department Head as an established path to command of a Naval Shipyard.

e. Recognize key "Face the Fleet" jobs on Fleet and Type Commander Staffs, NAVSEA/PEO, OPNAV and at other activities as important career paths leading to command of a Naval Shipyard. Provide visibility and guidance to junior EDs and their mentors of career paths that can lead to Naval Shipyard Command.

f. Provide EDs the background and expertise requisite to successful tours as Shipyard Commanders at shipyards engaged in naval nuclear work.

5. Action

a. The Deputy Commander for Logistics, Maintenance, and Industrial Operations (NAVSEA 04), as sponsor of the program, shall direct the program in consonance with the Vice Commander

(NAVSEA 09), Deputy Commander for Submarines (NAVSEA 07), PEO Submarines, PEO Carriers, Director, Naval Nuclear Propulsion (NAVSEA 08), and other directorates and offices as appropriate.

b. NAVSEA 04, in conjunction with the Office of Engineering Duty Community Management (NAVSEA00ZP), shall ensure that career paths leading toward assignment as Shipyard Commander are consistent with the direction of this instruction.

c. EDs in career paths leading to command of Naval Shipyards shall, in addition, meet the prerequisite assignments listed in enclosure (1).

d. Prior to, or early during assignment as a Naval Shipyard Operations Officer, Production Resources Officer, Engineering and Planning Officer or Business and Strategic Planning Officer, EDs shall successfully complete a Shipyard Department Head training period conducted by NAVSEA 04 and 08. This training shall cover technical, financial, quality and production aspects of the management of shipyard operations.

e. Prior to assignment as a Shipyard Commander, EDs shall participate in a week long Naval Reactors Assessment of a Nuclear Shipyard and complete the Shore Station Command Seminar (about 4 weeks) conducted by the Chief of Naval Operations (N46).

A. W. LENGERICH
By direction

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PREREQUISITE ASSIGNMENTS FOR ENGINEERING DUTY OFFICERS IN CAREER PATHS LEADING TO COMMAND OF A NAVAL SHIPYARD

1. First Tour Naval Shipyard Assignment as a Commander and Below (Typically a Three-Year Tour)

a. The typical naval officer on his/her initial shipyard tour is assumed to be a lateral transfer from the line community. He/she has completed one or more sea tours and either completed postgraduate school or will have a follow-on tour at postgraduate school. First tour Engineering Duty Officers shall be assigned primarily to waterfront duties that directly support Engineering Duty Qualification (EDQP) during the first 18-24 months of their initial shipyard tour. While qualifying, officers will be assigned to propulsion plant work of a nuclear powered ship project or as an assistant in the Nuclear or Non-nuclear Engineering and Planning Departments. During this tour, all candidates will be monitored by an Engineering Duty Officer Captain to maintain uniformity. Officers on their initial shipyard tour will be expected to complete the following qualifications:

Engineering Duty Qualification Program (EDQP)

Nuclear Project Superintendent School

Assistant Project Superintendent for Nuclear

Assistant Project Superintendent for Non-nuclear

NOTE: Assistant Project Superintendent (nuclear or non-nuclear), shall qualify per reference (c)

5) Ship Safety Superintendent and Ship Safety Officer

(6) Docking Officer. It is recognized that, for some activities, the limited scheduling of docking evolutions may prohibit all officers from full qualification. However, all initial tour Engineering Duty Officers should complete the Docking Officer Qualification to the maximum extent possible, particularly those aspiring to command of a Naval Shipyard.

b. After the initial nominal 18-24 month qualification period, officers should be assigned for at least one year as a Nuclear or Propulsion Zone Manger/Assistant Project Superintendent. During this time period, the focus of career development should be on obtaining a firm grasp and sound understanding of the basic discipline and tenants of the Naval Nuclear Propulsion Program with respect to refueling, overhauling, and maintaining nuclear warships. This time period should include regular observation, evaluation and mentoring by senior shipyard Nuclear Managers as well as military Department Heads to guide and assess progress and suitability for follow on shipyard tours. Alternatives to fulfill this requirement for significant Nuclear Propulsion Program experience include assignment to one of the following positions, provided the duties include significant daily interface with nuclear work and the officer's future potential for follow on shipyard tours can be evaluated: Assistant in the Nuclear Engineering and Planning Department, Assistant to the Nuclear Production Manager, Assistant to the Radiological Monitoring Division Head, Assistant in the Engineering and Planning Department, Assistant Business Operations Officer, Assistant in the Quality Assurance Office.

c. During the early stages of their careers, many officers will be undecided as to whether they desire to ultimately command a Naval Shipyard, or even serve in a follow-on shipyard assignment. The mentoring and guidance provided by shipyard leaders during the initial shipyard tour can be critical in influencing top performing officers to pursue a Naval Shipyard career path. During their initial shipyard tour, top performing officers should be assigned to positions of significant nuclear experience as discussed in Paragraph 1.b to ensure they stay competitive for future shipyard assignment as well as to ensure that the EDO Community maintains a cadre of officers with a sound working understanding of the Naval Nuclear Propulsion Program.

d. Permanent Change of Station (PCS) tour lengths during initial shipyard assignment are often determined by the needs of the Navy to fill billet requirements. However, where possible, consideration should be given to extend initial tour

lengths for top performing officers to allow obtaining significant depth and breadth of experience.

2 Subsequent Naval Shipyard Tour(s) as a Commander and below

a. Second tour shipyard assignments should normally be served in a different shipyard from the initial tour to allow for exposure to different missions, workload mix, regional and homeport issues, and industrial management practices and best practices. The policy of serving a second tour in a different shipyard from the first also allows officers an opportunity to develop experience working on both submarines and nuclear aircraft carriers.

b. It should be recognized that assignment to a second shipyard tour as a commander or lieutenant commander indicates that the officer has likely expressed a desire to ultimately command a Naval Shipyard. Accordingly, these officers should be carefully detailed within the shipyard to build upon the experience obtained during their first shipyard tour as defined in paragraph 1.b above, as well as prepare these officers for follow-on assignment as a Shipyard Department Head. Here again, this time period should include regular observation, evaluation and mentoring by senior shipyard Nuclear Managers as well as military Department Heads to guide and assess progress and suitability for follow-on Department Head assignment. Additionally, second tour officers should be provided job assignments that afford regular exposure and interface with the local Naval Reactors Representatives Office (NRRO), the Reactor Plant Contractors Office (RPCO), and the NAVSEA Ship Representatives Office (NSRO).

c. At the lieutenant commander level, the tour will typically be divided between Operations Department and Non-Operations Department assignments consistent with experience gained from the initial shipyard tour as described in Paragraph 1.b.

d. At the commander level the tour will typically involve one of the following assignments:

1 Business Operations Officer.

(2) Project Superintendent or Assistant Project Superintendent assigned to a major submarine or aircraft carrier project.

Assistant Engineering and Planning Officer.

Assistant Production Resources Officer.

(5) Assistant to the Nuclear Engineering and Planning Manager.

6) Assistant Operations Officer

7 Assistant to the Nuclear Production Manager.

NOTE: Prior to assignment to any of the above positions, the officer shall have completed the qualification and job assignments of paragraph 1 above.

3. Complementary and Parallel Duty Assignments Outside of Naval Shipyards.

The EDO Community has many critical billets that are complementary to Naval Shipyard billets and provide a parallel path leading up to assignment as a Naval Shipyard Department Head. These billets directly support fleet maintenance and readiness and form alternatives to second or third tour Naval Shipyard assignments below the Department Head level:

a. EDO (Nuclear) Program. The Director, Naval Nuclear Propulsion, has authorized a number of Surface Warfare nuclear qualified officers to become EDs and still retain their eligibility for duty in connection with supervision, operation, and maintenance of naval nuclear propulsion plants by reference (d). These officers apply their nuclear training and operational experience as EDs, both afloat and ashore, in support of the CVN and nuclear maintenance infrastructure and with the ultimate objective of being assigned as Reactor Officer of a CVN during extensive maintenance periods. These officers will complete an initial nuclear surface ship assignment and qualify as Engineer Officer prior to lateral transfer to the Engineering Duty community and their initial qualification tour.

Prior to becoming eligible for Reactor Officer, they will complete another sea tour as Principal Assistant to the Reactor Officer on a CVN, either as Reactor Mechanical Assistant, Main Propulsion Assistant, or Reactor Electrical Assistant.

b. CVN Chief Engineer, Submarine Tender Repair Officer, Submarine Shore IMA/TRF Repair Officer, or equivalent project oversight at an integrated Intermediate and Depot activity.

c. Nuclear Regional Maintenance Department Officer.

d. Supervisor of Shipbuilding Department Head or Program Manager's Representative.

e. SRF Department Head.

f. Submarine or Aircraft Carrier Type Commander Maintenance Officer or Assistant Maintenance Officer at the Commander/Captain Level

g. OPNAV Staff assignment at the Commander/Captain level.

h. NAVSEA/PEO assignment at the Commander/Captain level (e.g., SEA 04, 05, 07, PEO Submarines, PEO Ships, or PEO Carriers).

4. <u>Naval Shipyard Department Head Tour as a Captain</u>

a. The primary goal is to spend at least 12 months as the Operations Officer to ensure that officers obtain the requisite experience managing, integrating, and prioritizing the shipyard productive effort. Consistent with this is primary responsibility for waterfront cost and schedule performance, communication and integration with Ship's Force efforts, and identification and resolution of quality problems.

b. When not serving as Operations Officer, captains aspiring to command of a naval shipyard should serve as Production Resources Officer (first choice), or Engineering and Planning Officer (second choice). These billets provide experience in training, workload forecasting, and matching resources to requirements for the shipyard workforce as well as resolution of quality problems and process improvement.

c. Paragraphs 4.a and 4.b above provide the established billet policy for careers leading to command of a naval shipyard. The particular needs of an individual Naval Shipyard may at times require a modification to this policy. In such an event, the Shipyard Commander should consult with NAVSEA 04 and NAVSEA 08X to ensure the individual officer is not penalized for an alternate department head assignment plan.

5. Assignment at Naval Reactors Headquarters

a. There are a number of training and qualification programs for junior Engineering Duty Officers; references (b) and (c) are examples. One such program assigns highly motivated new Naval Officers who possess outstanding academic records to Naval Reactors Headquarters in Washington, DC. This assignment is typically for five years, including six months of study at the Bettis Reactor Engineering School. At the end of their initial five-year Naval Reactors Headquarters tour, some officers elect to pursue a career as an EDO at Naval Reactors Headquarters, and others may elect to pursue a career as an EDO outside Naval Reactors Headquarters. The experience gained during the Naval Reactors Headquarters assignment is ideal for a career leading to command of a Naval Shipyard. In fact, a number of former Naval Reactors Officers have gone on to serve as Shipyard Department Heads, Supervisors of Shipbuilding, and Shipyard Commanders. Typically, such officers leaving Naval Reactors Headquarters will apply for acceptance into the Engineering Duty Officer Dolphin Program and pursue Submarine Qualification. These Officers will serve their subsequent tour in a Nuclear Shipyard or will obtain a technical Master's Degree followed by assignment to a Nuclear Shipyard.

b. On a case basis, with concurrence of the Bureau of Naval Personnel, especially motivated and qualified officers may be nominated for assignment to Naval Reactors for a tour of duty as a Nuclear Propulsion Engineer in Washington, DC. Such an assignment is subject to the billet needs of the Navy and is reserved only for those officers with clear and demonstrated potential.

6. Training in Naval Reactors Representative's Offices (NRRO)

a. Historically, there have been a number of training and qualification billets at Naval and Private Sector Shipyard NRRO's for highly motivated Engineering Duty Officers possessing outstanding academic and performance records. While, billet distribution has not enabled continual assignment to these positions, EDO Community Managers and mentors should consider assignment of especially qualified officers with clear and demonstrated potential to this training opportunity.

b. In this billet, the individual is exposed to policies, practices, and management of nuclear propulsion plant maintenance and repair including technical, nuclear production and planning processes; how the shipyards, the NRRO, and NAVSEA 08 fit into the joint Navy/Department of Energy Naval Nuclear Propulsion Program and monitoring and oversight responsibilities of the NRRO and NAVSEA 08. The individual is assigned responsibility, under the direction of the Naval Reactors Representative, to monitor various aspects of naval nuclear work performance by the shipyard. However, the individual does not obtain practical experience in the various techniques of directing, progressing, and controlling naval nuclear work. Accordingly, during subsequent assignment at a different shipyard, the individual should normally qualify and be assigned as an Assistant Project Superintendent (Nuclear) for at least 18 months. Individuals who successfully complete this NRRO training should have little difficulty qualifying as an Assistant Project Superintendent (Nuclear). Further, the experience and perspective they gain during the 18-month NRRO training will enhance their performance as an Assistant Project Superintendent and will significantly contribute to their potential for subsequent shipyard assignments.