DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND
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IN REPLY TO

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NAVSEA INSTRUCTION 3967.1B

From: Commander, Naval Sea Systems Command
To: Commander, Naval Surface Warfare Center (SEA-00V)

Subj: QUALITY EVALUATION PROGRAM FOR CONVENTIONAL ORDNANCE AND WEAPONS SYSTEMS

Ref: (a) SECNAVINST 5400.15A
(b) SECNAVINST 5000.2B
(c) OPNAVINST 4850.1B
(d) OPNAVINST 8020.14

1. Purpose. To establish policy and assign responsibilities for the Naval Sea Systems Command Weapons and Ordnance Quality Evaluation (QE) Program. This instruction is a major revision and should be read in its entirety.

2. Cancellation. NAVSEA Instruction 3967.1A, of 5 April 1985.

3. Scope. This instruction is applicable to the total life cycle of all conventional ordnance and weapons, identified as Cog Symbols 2T, 4T, 6T, 8T, and 8S, under the cognizance of the Naval Sea Systems Command.

4. Background. Ordnance and weapons degrade due to age and/or exposure to environmental stressors. This degradation manifests itself in changes to the safety, reliability, and performance parameters or characteristics of the item or system. The degradation results from time (age) and environmental exposure induced changes in chemical and physical properties and from the effects of logistic (storage and deployment) and maintenance actions. The identification of degradation trends in ordnance and weapons; scientific and statistical analysis to predict the future safety, reliability, and performance expectations; and recommendations for mitigation, maintenance, or removal of items from the stockpile are required to prevent unacceptable safety, reliability, and/or performance risks.

Reference (a) and (b) assign responsibilities for the life cycle management of conventional ordnance and weapons. Reference (a) specifically assigns, to the SYSCOMS, the responsibility to provide support services to the PEO/PM structure and to oversee the core processes, and sustain the most effective and efficient infrastructure required to support acquisition, in-service support and disposal of weapons systems and commodities. A centralized QE Program provides the most effective and efficient mechanism for the planning, establishment, implementation, execution, and maintenance of a infrastructure to provide the required test, evaluation, and analysis of weapons systems and ordnance items to satisfy the requirements of references (b), (c) and (d).

5. Policy. COMNAVSEASYSCOM has established and will maintain a centralized QE Program, including a QE Technologies and Equipment (QETE) Program, as a test, evaluation, and analysis core process for all conventional ordnance and weapons systems under its cognizance. A centralized QE program provides the preferred method to monitor and predict the degree of degradation of common components and technologies across all commodities by eliminating duplicative testing requirements, permitting sharing of test results across acquisition programs, and assuring maximum utilization of specialized QETE for test, evaluation, and analysis. The centralized QE program additionally implements and supports the requirements of reference (c) to ensure that consistent quality evaluation data across all NAVSEA weapons and ordnance programs is produced and maximum synergy and sharing of data is achieved.

The QE Program shall provide for and ensure the most effective and efficient QE infrastructure needed to support all NAVSEA conventional weapons systems and ordnance items or commodities and shall provide for the "surveillance for pyrotechnics, explosives, rocket motors, and other items that have limited or require minimum service-life" as required by reference (b). Responsibility for the management of the NAVSEA QE program is assigned to the Naval Ordnance Safety and Security Activity (NOSSA).

6. Summary of Actions and Responsibilities

a. Navy Ordnance Safety and Security Activity (NOSSA) (N8)

(1) Serve as the Program Manager (PM) for the NAVSEA QE Program. Manage the planning, programming, budgeting, and execution of the NAVSEA QE Program (O&M,N). In addition, manage

the QE Technologies and Equipment (QETE) Program to provide for the development (R&D) of new QE technologies, the economical procurement (OPN), and maintenance (O&M,N) of common QE test equipment to support the basic QE Program. Both the basic QE and the QETE Programs are resourced via Deputy Chief of Naval Operations (Director Surface Warfare OPNAV N76).

(2) Prioritize the execution of resources; ensure a technologically sound QE effort; foster the development and the use of new test and evaluation technologies and techniques; ensure commonality/sharing with the joint Services and/or Allies as appropriate; and coordinate with the Acquisition Program Managers (APMs) to provide for the efficient and effective QE planning, development, and execution.

(3) Determine current condition of the conventional ordnance stockpile by test, evaluation, and/or engineering analysis of the safety, reliability, and performance characteristics. Verify safety-in-storage, handling, and use as part of service life determinations.

(4) Identify trends in safety, reliability, and performance characteristics, predict the future condition of the stockpile and expected service or useful life. Recommend maintenance or replacement intervals as appropriate. Approve, in coordination with the APMs, weapons and ordnance service life expiration dates based on results from QE Program findings and ensure this information is provided to Fleet users, and OPNAV Resource and Assessment Sponsors.

(5) Identify causative factors that affect the safety, reliability, and performance health of the stockpile; including those originating from design, assembly, maintenance, handling, storage, deployment, and interface with weapons and combat systems. Monitor preventive or corrective actions and policies to determine their effect on safety, reliability, and performance.

(6) Maintain a database of QE test and evaluation results, historical characteristics, and trends for future reference, application, and information for Navy/DoD activities responsible for developing, procuring, and maintaining conventional ordnance and weapons. Develop metrics to provide for a quantitative self-assessment of QE program effectiveness and performance.

(7) Ensure the development and maintenance of a tailored QE Program Plan (QEPP), and necessary supporting documentation, that discloses the general and specific characteristics required for QE life cycle planning for each conventional weapon system or ordnance item/family. This plan shall describe the QE Program for the system/family that satisfies the requirements of reference (c) and (d). The plan shall include reference to higher-level technical documents; i.e., Test and Evaluation Master Plans (TEMP), Operational Requirements Documents (ORD), System Safety Plans (SSPs), Acquisition (APs) or Integrated Logistics Support Plans (ILSPs), etc. and provide for the identification of QE test items, processes and procedures for determining critical characteristics, evaluation or assessment criteria, and other information as required.

(8) Establish and maintain formal interface and coordination with Commander Operational Test and Evaluation Force (COMOPTEVFOR) to ensure common goals, objectives, and share test and evaluation results and analysis as appropriate.

(9) Conduct reviews with the APM or Fleet representatives, as appropriate, to assess the program progress, adherence to plans, results of stockpile evaluations and recommendations, logistics considerations, and make program adjustments as appropriate.

(10) Maintain an active role in Weapon System Safety Reviews (WSSRs) and the Weapons Systems Explosive Safety Review Board (WSESRB) and provide for continuous interface and information exchange.

(11) Assist Deputy Chief of Naval Operations (Fleet Readiness and Logistics OPNAV N41) in the preparation and conduct of semi-annual Navy QE Program Baseline Assessment Memorandum (BAM) reviews as required by reference (c).

(12) Ensure QE technologies; techniques, equipment, procedures, and processes are fully compatible and integrated with the Navy's Insensitive Munitions (IM) Program. The continued "IMness" of a weapon or ordnance as it ages or is exposed to environmental stressors is a safety-in-storage, handling, and use criterion.

b. Acquisition Program Managers (APMs)

(1) Provide resources, including funding and In Service Engineering Agent (ISEA) and Design Agent (DA) support, for the

development of the initial QE Program Plan (QEPP) during the System Development and Demonstration phase of the respective conventional ordnance or weapons system and ISEA/DA support during the maintenance of that plan over the system life cycle. Provide for the review and approval of the QEPP in coordination with the QE PM. Include QE test sample provisioning in acquisition and logistic support planning and budgeting to ensure the availability of test samples based on requirements cited in the QEPP. Provide annual QE test samples, throughout the life cycle, including logistic support for return of unexpended samples to inventory.

(2) Determine, in conjunction with the QE PM, the initial estimated service life for weapons and ordnance items or components subject to degradation. Publish initial and revised service lives for respective weapons and ordnance items.

(3) Provide first article, lot acceptance, production, depot and intermediate level maintenance, and failure analysis data to the responsible QE personnel. Provide for access to appropriate system databases (depot level maintenance, configuration management, etc.) by QE personnel. Involve responsible QE personnel in acquisition, design, or logistics reviews; e.g., Production Design Reviews (PDRs) or Integrated Logistics Support Management Team (ILSMT) meetings, etc., as appropriate to facilitate the use of QE knowledge of historical designs or materials as relates to long-term safety, reliability and/or performance.

(4) Advise the QE PM of actions taken on QE results and recommendations as reported by the QE Program. Participate in QE Program progress reviews as requested or appropriate.

c. Naval Surface and/or Undersurface Warfare Center

(1) Support the QE PM, as assigned or requested, in the planning and execution of the QE Program for NAVSEA weapons and ordnance systems.

(2) Maintain the required skills for QE; establish a process that identifies core equity requirements and provides for the continued availability of those technical and engineering skills necessary to conduct QE efforts. Maintain an efficient operating structure and the necessary facilities to ensure the most effective use of QE resources.

7. Effective Date and Implementation: This instruction is effective immediately.

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