



DEPARTMENT OF THE NAVY

COMMANDER NAVY REGION SOUTHWEST
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SAN DIEGO, CALIFORNIA 92132-5100

IN REPLY REFER TO:
COMNAVREGSWINST 4855.1
N42

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COMNAVREGSW INSTRUCTION 4855.1

Subj: WEAPONS QUALITY ASSURANCE PROGRAM REQUIREMENTS FOR WEAPONS STATIONS, AIR STATIONS AND OTHER SHORE ACTIVITIES

Ref: (a) NAVSUP P-805 (NAVSEA TW010-AC-ORD-010)
(b) OPNAVINST 4790.2
(c) Quality Program for Lightweight Torpedo/Rextorp Fleet Maintenance Activities (SL855-AB-PMM-010)
(d) STANDARD Missile Quality Assurance Program Requirements for Weapons Stations and Shore Activities (MD 57489)

Encl: (1) Weapons Quality Assurance Program Requirements for Weapons Stations, Naval Air Stations and Other Shore Activities

1. Purpose. To provide guidance and direction for implementing and maintaining a quality assurance program for ordnance, and related products and services, at Navy Region Southwest activities.

2. Background. Since the expiration/cancellation of NAVSEA TO300-AM-ORD-010 and NAVSEA/NAVAIR QAP 100, there is not a higher level instruction that mandates implementation of a quality program within the Navy community. Some quality requirements, such as usage of Mil-Std 129 tags and inspection indicators, are described in documents such as Reference (a). In addition, there are quality program requirements for maintenance of Armament Weapons Support Equipment (AWSE) in Reference (b). Individual weapons programs have recognized the need for definitive QA guidance and have issued program specific QA manuals as evidenced by References (c) and (d). However, there is not one document that provides Quality Assurance guidance for all weapons processing performed by NRSW Weapons activities. The intent of enclosure (1) is to close that gap for ordnance processing within Navy Region Southwest.

3. Scope. This instruction is applicable to all Weapons activities within Navy Region Southwest.

4. Policy. Activities will have one year from the date of this instruction to develop and implement the quality assurance procedures as outlined in Enclosure (1). Assistance in development or implementation of quality assurance program requirements may be requested from the Weapons Quality Assurance

Focal Point, Weapons Business Office, Code N42RB2, at Naval Weapons Station Seal Beach, CA.

5. Actions.

a. Weapons Site Managers.

(1) Ensure the requirements of enclosure (1) are implemented at all activities.

(2) Appoint in writing an individual to act as the local activity Quality Assurance Focal Point to oversee QA program implementation.

(3) Ensure continual monitoring and review of implementation status.

b. Weapons Business Office.

(1) Appoint in writing an individual to act as the Regional Quality Assurance Focal Point.

(2) Provide assistance to activities in implementing the requirements of enclosure (1).

(3) Assess periodically, on an eighteen month cycle, the implementation status of the QA program at each Navy Region Southwest activity processing ordnance and related material.


P. N. BRUNO
By Direction

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WEAPONS QUALITY ASSURANCE
PROGRAM REQUIREMENTS

FOR

WEAPONS STATIONS, AIR STATIONS
AND OTHER SHORE ACTIVITIES

NAVY REGION SOUTHWEST
July 2001

Table of Contents

1.0 Scope and Introduction	4
2.0 References	5
3.0 Definitions	5
4.0 Management Responsibility	8
4.1 Quality Policy	8
4.2 Organization	8
4.3 Resources	9
4.4 Quality Focal Points	9
5.0 Quality Planning	10
6.0 Contract Review	11
7.0 Design Control	11
8.0 Documentation Control	11
8.1 General	11
8.2 Documentation Change Control	11
8.3 Initial Review	12
9.0 Procurement/Purchasing	12
9.1 Application	12
9.2 References	12
10.0 Control of Customer-Supplied Material	13
11.0 Product Identification and Traceability	14
12.0 Process Control	14
13.0 Inspection and Testing	15
13.1 General	15
13.2 Receipt Inspection	15
13.3 In-Process Inspection	16
13.4 Final Inspection and Acceptance Testing	16
13.5 Inspection and Test Records	17
13.6 Inspection Indicators	17
13.7 Control of Inspection, Measuring and Test Equipment	17
14.0 Control of Nonconforming Material	19
14.1 General	19
14.2 Identification and Segregation	19
14.3 Disposition	19
14.4 Nonconformance Reporting	19
14.5 Corrective Action	20
14.6 Preventive Action	20
15.0 Handling, Storage, Packaging, Preservation and Delivery ..	21
15.1 General	21
15.2 Material Condition Identification and Segregation	21
15.3 Storage Environmental Controls	21
15.4 Control of Age-Dated Material	21
15.5 Preparation for Shipment	22
15.6 Hazardous Material	22
16.0 Control of Quality Records	23

17.0 Internal Program Evaluations/Audits	23
17.1 General	23
17.2 Internal Evaluation Planning	23
17.3 Scheduling	24
17.4 Team Composition	24
17.5 Reporting of Program Evaluation and Corrective Actions .	24
18.0 Training	25
18.1 Certification	25
18.2 Explosive Safety Training Program	25
19.0 Servicing	25
20.0 Statistical Techniques	26

1.0 SCOPE AND INTRODUCTION.

1.1 Scope

a. This instruction delineates the minimum requirements of a quality assurance program for activities under the Commander, Navy Region Southwest, Weapons Assistant Chief of Staff (ACOS). Detailed technical quality requirements pertaining to specific weapons and support systems are to be found in the applicable technical documents. The intent of this instruction is to describe the overall planned and systematic actions necessary to provide assurance to the program and site managers that weapons and services delivered to the Fleet were processed in accordance with and conform to the specified requirements.

b. These requirements are to be implemented at all activities within the Navy Region Southwest (NRSW) where weapons are processed. If a more detailed description of Quality Assurance (QA) methodology is required for a specific weapons activity, that weapons activity is authorized to develop local instructions or Standard Operating Procedures (SOPs) for Quality for those unique situations.

1.2 Introduction

a. The quality program requirements described by this instruction have been proven over time in both private industry and in government agencies to provide assurance of quality and have been delineated in various quality documents including MIL-Q 9858 and the International Standard (ISO) 9000 series. This instruction is patterned after the International Standard ISO 9002 (Quality Management and Quality Assurance Standards). To retain consistency with the format of ISO 9002, where ISO 9002 describes a quality program action that is not applicable to Weapons within NRSW, the topic name will be given and described as "Not Applicable for NRSW Weapons".

b. This document was prepared by NRSW Weapons Support, Code N42RB2. Comments or requests for revision should be addressed to: Commander, Navy Region Southwest, Weapons ACOS, Weapons Business Office, Code N42RB2 (Quality Assurance Focal Point), Naval Weapons Station Seal Beach, 800 Seal Beach Blvd., Seal Beach, CA 90740-5000.

2.0 REFERENCES.

a. Since the expiration/cancellation of NAVSEA TO300-AM-ORD-010 and NAVSEA/NAVAIR QAP 100, there is not a higher level instruction that mandates implementation of a quality program within the Navy community. Some quality requirements, such as usage of Mil-Std 129 tags and inspection indicators, are described in documents such as the NAVSUP P-805 series (Formerly TW010-AC-ORD-010). In addition, there are quality program requirements for maintenance of Armament Weapons Support Equipment (AWSE) in OPNAVINST 4790.2, and individual weapons programs have recognized the need for definitive QA guidance and have issued program specific QA manuals as evidenced by Quality Program for Lightweight Torpedo/Rextorp Fleet Maintenance Activities (SL855-AB-PMM-010) or STANDARD Missile Quality Assurance Program Requirements for Weapons Stations and Shore Activities (MD 57489). However, there is not one document that brings all of these requirements together for all processes performed by NRSW Weapons activities. The intent of this instruction is to do that for the Navy Region Southwest Weapons Program.

b. Specific documents are referenced in the program areas that follow but should not be considered as a comprehensive listing for all applicable requirements that may apply to a particular weapons or associated process.

3.0 DEFINITIONS.

Lists of quality assurance terms and definitions are to be found in MIL-STD-109 "Quality Assurance Terms and Definitions" and in International Standard ISO 8402. The following is a short list of terms and definitions pertinent to this instruction:

Attribute: A characteristic or property which is appraised in terms of whether it does or does not exist with respect to a given requirement. Attributes and characteristics (see definition below) define the technical requirements of quality for a weapon.

Calibration: Comparison of two instruments or measuring devices, one of which is a standard of known accuracy traceable to national standards

Characteristic: A physical, chemical, visual, functional or any other identifiable property of a product of material. Characteristics and attributes define the technical requirements of quality for a weapon.

Classification of Defects: The categorization of non-conformances of a product that are rated according to their seriousness (see critical, major and minor defect definitions below).

Critical Defect: A defect classification of a product that is likely to result in hazardous or unsafe conditions for individuals using, maintaining or depending upon the product or would prevent the performance of the tactical function of a major end item such as an aircraft, weapons system or ship.

Defect: Any nonconformance of a characteristic to the specified requirements

In Service Engineering Agent (ISEA): The governmental agency tasked with deciding technical issues for a given weapons system.

Inspection: The examination and testing of products including materials, components and intermediate assemblies to determine if they conform to specified requirements

Inspection Indicator: A mark or notation, usually from a stamp in the ordnance community, affixed by an authorized individual to documents or tags associated with an item denoting the status of the results of an inspection process. The indicator is traceable to the individual performing the inspection and is frequently linked with an inspection date.

Major Defect: A defect other than critical that is likely to result in failure or reduction of the usability of the product for its intended purpose.

Material Review Board: Individuals authorized to review, evaluate and determine disposition of specific non-conforming items.

Minor Defect: A defect that is not likely to reduce substantially the usability of the product for its intended purpose

Non-conformance: The failure of an item to conform to the specified requirements for any quality characteristic or attribute.

Quality: The conformance of all of the attributes and characteristics of an item to its specified requirements including performance in service

Quality Assurance (QA): A planned and systematic pattern of all actions necessary to provide adequate confidence that the item or product conforms to the established technical requirements.

Quality Assurance Focal Point: The organization or individual assigned responsibility for oversight of quality assurance for NRSW Weapons

Technical Documentation Change Review Board (TDCRB): Designated personnel assigned responsibility to review changes to technical documents to assure that all quality requirements are specified, clearly defined, and understood by all affected organizations

Testing: An element of inspection and refers to determination of the technical conformance of an item usually by means of mechanical and or electronic equipment, usually TAMS (see TAMS definition that follows), and according to prescribed procedures

Test and Monitoring System (TAMS): TAMS refers to equipment, including support equipment, used for monitoring or testing of all types of weapons systems and equipment. It refers to all devices used to measure, calibrate, gage, test, inspect, diagnose, or otherwise examine materials, supplies and equipment to determine compliance with specifications

4.0 MANAGEMENT RESPONSIBILITY.

4.1 Quality Policy. The quality policy of Commander Navy Region Southwest Weapons ACOS is imbedded in and best expressed by the Weapons NRSW Mission and Vision statements:

a. Mission: Our mission is to provide the Fleet with ordnance and services, safely and on time. We achieve our mission through innovative ideas, quality workmanship, and cost-effective practices.

b. Vision: Our vision is to be the Fleet's model for operational readiness, ordnance and weapons related support. We will achieve this by becoming a more cohesive, dedicated and professional team.

4.2 Organization. The responsibility and authority of personnel who manage, perform, and verify work affecting quality shall be clearly defined and documented. Personnel certified and assigned responsibility for quality assurance responsibility will be documented along with their certifications and any associated inspection indicators. Personnel involved in weapons processing will have the training and authority to:

- a. Initiate action to prevent occurrence of any product or process nonconformance;
- b. Identify and record product or process problems;
- c. Initiate, recommend, or provide solutions to product or process problems;
- d. Verify/validate solutions to product or process problems;
- e. Control further processing, delivery, or installation of nonconforming product until the deficiency or problem with the product or process has been effectively corrected and the solution verified/validated.

4.3 Resources. NRSW Weapons activities will provide adequate resources including trained personnel, required equipment and facilities for the management, performance of work and verification function including support of internal and external audits.

4.4 Quality Focal Points. The Weapons Program Manager will appoint a focal point for quality with responsibility for overseeing the quality program for Weapons for NRSW including maintenance of this instruction. The focal point will report on the performance of the quality system to Weapons management on a periodic basis. The focal point will conduct periodic and documented assessments of Weapons activities to evaluate the quality program and as a basis for improvement. Currently, this responsibility is assigned to Code N42RB2. Each Weapons activity within NRSW will also designate a focal point for quality assigned responsibility for local oversight of the quality program.

5.0 QUALITY PLANNING. Each Weapons activity shall implement the applicable requirements of this instruction and assign organizational components for their accomplishment. It is recognized that not all of the requirements listed in this instruction will be implemented in the same fashion at all sites. It is the intent of this instruction to allow flexibility in implementation to allow for differing complexity of processes. Each weapons activity will address the following quality planning considerations as appropriate:

a. Identification of any controls, special processes, equipment such as Test and Monitoring Systems (TAMS), Ordnance Handling Equipment, facilities or certification or special skills required to achieve the required quality.

b. Details of process and verification procedures, tests, documentation and computer software.

c. Identification of quality verification points for inspections or tests. This may be accomplished by use of shop travelers, ordnance issue/return chits, or other documentation that provides for referenced hold points in the weapons processing and a place for the applicable inspection indicator. This document will accompany the commodity throughout its processing and carry the serial number or other means of identification of the item. Similar items may be processed as a group using one document as appropriate and approved by the cognizant In Service Engineering Agent (ISEA).

d. Identification of quality records and retention requirements.

6.0 CONTRACT REVIEW.

In the event that responsibility for processing of weapons is assigned to a contractor, NRSW Weapons focal point personnel will review the contract task or performance work statement to determine that appropriate standards of quality are specified in the accomplishment of the contract. NRSW quality focal point personnel will conduct oversight of the contractor's quality assurance program including audits and inspections as appropriate to assure that the contract quality requirements are achieved in conjunction with the Contracting Officer's Representative (COR). Quality assurance surveillance plans as appropriate will be developed to conduct this oversight in a structured manner.

7.0 DESIGN CONTROL. Not applicable for NRSW Weapons Program.

8.0 DOCUMENT CONTROL.

8.1 General

Technical Documentation Change Control (TDCC) shall be provided by a single centralized documentation control system that ensures the systematic and timely distribution of accurate, complete, and current documentation.

8.2 Documentation Change Control

Each activity shall establish or ensure that a system is in place for maintaining technical documentation to the latest revision and change. For those weapons activities that interface with NAVAIR such as in performing maintenance on Armament Weapons Support Equipment (AWSE), the TDCC program will be in accordance with the latest change of NAVAIR 00-25-100. The system shall:

- a. Assure controlled, timely distribution, change and recall of documents when required.
- b. Prohibit the use of obsolete documents, documents containing unauthorized changes, and changes not identifiable to originating individual or group. All controlled documents shall be marked with red ink to

readily identify authorized controlled documents from unauthorized Xeroxed copies.

c. Assure availability and use of properly updated documentation by authorized personnel.

d. Authorize use of partial hard copies of electronically distributed controlled technical documents as work packages or checklists for use in remote work areas not serviced by computer Local Area Networks. These documents shall be marked "For Information Use Only", dated and are not to be used for more than one week's duration. The intention is to force reliance on the controlled electronic distribution system for updates to the work package or checklist.

8.3 Initial Review. All changes to technical documentation shall be reviewed by a Technical Documentation Change Review Board (TDCRB) comprised of local weapons site personnel designated by the local ordnance manager and may include the local quality focal point and production representatives. The ordnance manager may assign this responsibility to an individual having sufficient technical knowledge. The intent of a documentation review is to assure that all changes adequately cover all quality requirements, allow for maintaining process control and inspection requirements, and are clearly defined and understood by all affected personnel. If comprised of a committee, the TDCRB may elect to meet as a committee or review the changes individually. In the event any pertinent requirements are missing from technical documents, are unclear, missing or inaccurate, the activity shall promptly notify the issuing activity in writing, using normal communication channels, reporting such items for correction or clarification. This is usually accomplished by means of a Technical Documentation Change Request (TDCR) found in the back of most technical manuals. Technical documentation inadequacies shall be coordinated with the cognizant In Service Engineering Agent (ISEA) where applicable.

9.0 PROCUREMENT/PURCHASING.

9.1 Application. Decisions pertaining to procurement of Weapons systems, components and associated equipment are made by Department of Defense (DOD) personnel associated with weapons program offices. Responsibility for purchasing at NRSW Weapons activities remains primarily at

the level of reporting of defective material supplied through the supply system.

9.2 References. Suppliers of materials to the Navy are subject to the NAVSEA Unified Vendor Evaluation Program (NUVEP). The mechanism for report unsatisfactory material is given in SECNAVINST 4855.3A.

10.0 CONTROL OF CUSTOMER-SUPPLIED PRODUCT.

Local procedures will be developed as necessary to manage and control customer-supplied material such as ordnance supplied by an air squadron or ordnance material placed in temporary storage for a ship at a weapons station.

11.0 PRODUCT IDENTIFICATION AND TRACEABILITY.

- a. Weapons, component parts and materials shall be controlled during all phases of operations and storage to provide confidence that only acceptable parts and materials are used; to prevent deterioration, damage, degradation; unauthorized issue; and to ensure that appropriate protective measures are applied.
- b. Objective evidence of inspection and tests, status shall be provided following a documented and controlled procedure for inspection indication. Material held in storage shall be properly identified, segregated, controlled, and protected.
- c. The methods for accomplishing this will be through the use of various methods such as Material Condition Tags/Labels and barcode labels as specified in Appendix A of NAVSUP P-805 (formerly NAVSEA TW010-AC-ORD-010) or documents such as shop travelers or ordnance issue/return chits as appropriate.

12.0 PROCESS CONTROL.

Each Weapons activity shall identify, plan and document the production, installation, and work processes that affect quality and shall ensure these processes are conducted under controlled conditions. Controlled conditions shall include:

- a. Documented validated procedures defining production, installation, and processes such as Standard Operating Procedures (SOPs), technical manuals, checklists or automated STANDARD Missile Processing Documents (SMPDs).
- b. Use of approved and certified equipment such as hoists and slings and environment controls including considerations such as temperature and humidity where appropriate.
- c. Compliance with referenced standards/codes, quality plans, and/or other procedures.
- d. Monitoring and control of process parameters and product characteristics including, but not limited to: test and inspection results, configuration management,

disposition of non-conforming material and certification of personnel.

e. Approval of processes and equipment by means of formal process validation prior to production startup to include an on-site walk through by the In Service Engineering Agent (ISEA) as appropriate, program managers and site operation personnel.

f. Criteria for workmanship, (e.g., written standards, representatives samples, or illustrations).

g. Maintenance of equipment and facilities to ensure continuing process capability.

h. Handling of Electro-Static Discharge (ESD) sensitive material shall be in accordance with the requirements of EIA-625 (MIL-STD-1686) or applicable weapons technical manuals.

i. Calibration of tools and test equipment, including an effective recall system of Test and Monitoring Systems (TAMS).

j. Training and certification of personnel.

13.0 INSPECTION AND TESTING.

13.1 General.

Weapons activities shall establish and maintain documented procedures for inspection to verify that specified requirements are met. Only personnel who have been properly trained and certified shall perform inspection following documented criteria.

13.2 Receipt Inspection

a. All material shall be inspected upon receipt to verify correct identity, quantity, and general condition as shipped.

b. Age sensitive material that is subject to degradation in quality characteristics affecting safety, security and/or readiness for issue shall be inspected upon receipt to identify any degraded quality, assign correct material

condition and status, and direct subsequent processing requirements.

13.3 In-Process Inspection.

- a. In-process inspection shall be performed to detect product, material, process, equipment, or workmanship defects as early as possible, and to initiate immediate action to correct any processing deficiencies detected.
- b. In-process inspection verification points will be assigned for various levels of criticality as applicable. Typical methods of accomplishing this is by means of the shop traveler, technical manual or automated processing software. Personnel actually performing the work will verify those points at the lowest level of criticality with higher levels reserved for independent verification.

13.4 Final Inspection and Acceptance Testing

- a. All final Inspections and Tests shall be conducted in accordance with specific weapons program processing instructions, locally approved documentation or other work authorization documents to demonstrate and verify conformance with specified requirements. The activity shall prepare and maintain procedures and instructions for those inspections and tests, which are not specifically documented in specific weapons program processing documents.
- b. The results of all inspections and tests performed shall be recorded and reported, as appropriate, for use in product, service, process, and Quality System improvement efforts.
- c. No product shall be delivered until all functions specified in the documented procedures have been satisfactorily completed. The associated data and documentation must be available and verified. Final acceptance shall include authentication by an approved final acceptance stamp or legible signature.
- d. When certification of special test equipment is required by the work authorization document, the activity shall arrange to implement the applicable provisions of the certification prior to use.

13.5 Inspection and Test Records. Each activity shall maintain records of inspection and test results in accordance with specific weapons systems requirements or for at least one year if not otherwise specified.

13.6 Inspection Indicators

a. Inspection status shall be indicated by the use of inspection indication stamps or legible signatures. Stamps shall be clear, readily recognizable, and controlled with respect to authorization and conditions for use. Flexibility of stamp markings will be allowed for local Weapons activity needs, but will carry a unique serial number traceable to the individual holding the stamp as well as the activity identification by means of letters/abbreviations or the Unit Identification Code (UIC). Signatures will be accompanied with a printed name in easy to read block letters.

b. Records shall be maintained which identify individuals with specific inspection stamps. When an individual vacates an inspection position, the stamps will be placed in secure bond for a period of six months before being issued to another individual. All stamps that are not issued will be held in a secure place to prevent unauthorized usage. Additional information on inspection indicators may be found in Appendix A of NAVSUP P-805 (formerly TW010-AC-ORD-010).

13.7 Control of Inspection, Measuring and Test Equipment.

a. The activity shall identify any Test and Inspection equipment used for product conformance verification and final acceptance. If applicable, test systems shall be certified and the certification certificate posted in the testing area. Any unapproved changes to test systems shall void the certification. Test system alignment and calibration out-of-tolerance conditions shall be assessed for impact to the weapons being tested in coordination with the In Service Engineering Agent (ISEA).

b. All Test System events (calibration, corrective action and preventive maintenance, certification, hardware and software changes, problems, failure modes, etc) shall be recorded in a systems log.

13.8 Calibration of Test and Measuring Systems (TAMS). All tools and test equipment requiring calibration will be managed in compliance with SECNAVINST 3960.6 (METCAL), OPNAVINST 3960.16 (TAMS), and OP43P6B (MEASURE). For those activities that perform maintenance on Armament Weapons Support Equipment (AWES), all the requirements of NAVAIRINST 13640.1 AND OPNAVINST 4790.2 Section 19 shall apply. The calibration program will demonstrate:

a. An effective recall system where all TAMS requiring calibration will be listed on the METCAL Program format 310 and 350 reports as applicable or their equivalent if calibration is preformed by a private calibration facility. Newly procured items are inducted into the system prior to use, obsolete or items that cannot be repaired are removed from the calibration cycle and disposed of in accordance with DOD procedures.

b. Calibration status of TAMS by use of standard calibration labels showing calibration status, when last calibrated, by what activity, when the next calibration is due and any special conditions of use. Items that are not required for production use, but desired to be retained for future use, shall be designated as "inactive".

c. Calibration by a certified calibration laboratory using standards traceable to the National Bureau of Standards and using approved and current calibration procedures by certified personnel.

14.0 CONTROL OF NON-CONFORMING MATERIAL.

14.1 General.

Nonconforming material shall be identified, controlled, and reported as required to effect corrective, preventive, and improvement action. Nonconforming material shall not be accepted for use except as authorized under formal and approved procedures.

14.2 Identification and Segregation

Items that deviate from drawings, specifications, other specified requirements, or expected conditions shall be identified as nonconforming, and segregated from conforming items. In the event that segregation is not feasible, items shall be clearly identified as nonconforming to preclude unauthorized use or continued processing.

14.3 Disposition

Designated personnel, such as those assigned to a Material Review Board (MRB), shall review and analyze each nonconformance to determine the cause of nonconformance, classify it as to importance, and specify disposition. Findings, recommendations, and disposition actions should be recorded on nonconformance documentation. Documentation may include formal Discrepancy Reports (DRs), memos, or even emails. Classification of dispositions is as follows:

- 1) Remove from Use
- 2) Return for Rework
- 3) Repair to Standard Repair Procedure
- 4) Return to Contractor
- 5) Use As Is/extend shelf life

14.4 Nonconformance Reporting

Nonconformances shall be reported utilizing a defined format and procedure. This procedure shall include provisions for material that requires special or expeditious handling or disposition to eliminate or minimize hazards to personnel or equipment and more serious material quality deterioration. Examples of these conditions are material involved in accidents or incidents, misfires or other reported malfunctions, heat, shock or moisture exposure. The initial nonconformance report shall

be prepared using an internal (activity) format, memo or email and processed for review and subsequent action. Following review and disposition of the nonconformance report, formal reporting per applicable policies may be required to the program office or ISEA.

14.5 Corrective Action

A corrective action system shall be established and maintained by each Weapons activity to:

- a. Notify the responsible organization of the need for corrective action;
- b. Assure that a reply by the responsible organization is received within a reasonable, prescribed time interval on the action taken, or to be taken, to correct existing deficiencies and to minimize or eliminate future occurrences;
- c. Determine the adequacy of the proposed corrective action;
- d. Conduct follow-up action to ensure corrective action is implemented and properly closed;
- e. Submit corrective action requests to higher levels of management in the event that either initial corrective action requests or follow-up actions have not accomplished satisfactory results.
- f. Non-conforming material supplied by activities or contractors external to the organization shall be reported via the procedures specified in SECNAVINST 4855.3A.

14.6 Preventive Action

Mere disposition of non-conforming material is not sufficient. Analysis will be made of instances of non-conformance to determine the root cause and the action required preventing its reoccurrence. Industry studies have shown that over 80 percent of non-conformances are systemic, or management controllable in nature. Typical actions that are preventive in nature include: training of personnel, replacement of equipment, change in procedures, screening of supplied material, etc. Local quality focal point representatives will coordinate with work area supervisors to assure adequacy of preventive action.

15.0 Handling, Storage, Packaging, Preservation and Delivery.

15.1 General

Products, parts, and materials shall be controlled during all operations and storage to ensure that only acceptable parts and materials are used; to prevent deterioration, damage, degradation, or unauthorized issue; and to ensure that appropriate protection is applied. Material held in storage shall be properly segregated, controlled, and protected. First-In-First-Out issue shall be observed whenever applicable.

15.2 Material Condition Identification and Segregation

Material condition tags/labels specified by MIL-STD-129, or an equivalent system approved by the specific weapons program, shall be used to indicate the inspection and condition status of all material, except material in process that has accompanying material condition status documentation. Unserviceable material shall be physically separated from serviceable material, pending disposition.

15.3 Storage Environmental Controls

Each activity storing material that is susceptible to environmental deterioration shall store such material in areas capable of providing an appropriate environment. If used and required by the specific weapons program, measuring equipment, such as temperature recording equipment, to monitor the environment of storage areas shall be calibrated. Environmental indicators, such as humidity sensors, shall be stored with the material as required by the specific weapon program. Environmental indicators shall be examined periodically to verify that the environmental limitations have not been exceeded. When there is an indication that limits have been exceeded, the affected material shall be considered nonconforming, the documentation reporting the non-conformance shall be initiated, and the material condition code changed to "Suspended" until further disposition is made.

15.4 Control of Age-Dated Material

Each activity shall maintain records of material subject to age deterioration. Age dated material shall be marked using MIL-HDBK-129, DoDD-4000.25, and NAVSUP PUB 409 as a guide to identify items with a non-extendable (Type I) storage period and items with a storage time which may be extended (Type II) after completion of prescribed inspection and/or restorative action. The local quality assurance program will include periodic review of storage areas containing age sensitive material for compliance to program requirements. Material Review Board action per paragraph 14.3 will be initiated as appropriate.

15.5 Preparation for shipment

Pre-shipment and pre-issue inspection shall be performed to prevent releasing unauthorized, unacceptable, or improperly identified material. Pre-shipment and pre-issue inspection shall be performed in accordance with approved inspection and test procedures using the applicable weapons documentation. Particular notice will be made of Notices of Ammunition Reclassification (NARS) as found in NAVSUP P-801 (formerly NAVSEA TWO24-AA-ORD-010) "Ammunition-Unserviceable, Suspended and Limited Use".

15.6 Hazardous Material (HazMat)

a. Hazardous Material shall be controlled. Specific means for identification, segregation, storage, issue, use, and disposal shall be documented and maintained. Personnel shall be appropriately trained in the use and safeguard of such material.

b. Work authorizations and task assignments shall be reviewed to determine any special processes or handling procedures that may require HazMat considerations. These shall be included in work documents, e.g. SOPs, Travelers, inspection instructions, etc.

16.0 CONTROL OF QUALITY RECORDS.

Quality records (hard copy or electronic media) shall be legible and stored in such a way that they are readily retrievable in facilities that provide a suitable environment to prevent damage, deterioration, or loss. Records shall provide evidence that necessary inspections and tests were performed and shall be suitable in format, accuracy, and detail to permit analysis, as required, for initiation of specific corrective actions. Retention of records shall be for a period of 1 year or in accordance with the specific weapons program.

17.0 INTERNAL PROGRAM EVALUATIONS/AUDITS.

17.1 General

Periodic internal evaluations/audits shall be conducted by the Weapons ACOS regional QA focal point of all weapons site Quality Assurance programs to determine the effectiveness of the quality system and if results comply with the specified requirements of this instruction.

17.2 Internal Evaluation Planning

The internal evaluation will include, as a minimum:

- a. Verification of documentation availability and change control;
- b. Examination of operations and documentation in the processing areas;
- c. Determination of personnel familiarity and compliance with required documents;
- d. Verification of personnel training and certification;
- e. Verification of test and inspection equipment maintenance and calibration; and
- f. Verification of facility and safety requirements.

17.3 Scheduling

Internal evaluations shall be conducted as either a comprehensive annual evaluation, or partially at intervals, with all areas being addressed at least once during any consecutive 18-month period. Local QA focal point personnel will conduct internal evaluations of specific program requirements including those of work areas involved in Aviation Weapons Equipment Support (AWES). Internal evaluations shall cover all shifts and be conducted according to an evaluation schedule that is updated annually and in conjunction with preparation for external evaluations as appropriate. In the event that internal/external non-conformances or customer complaints occur, planned evaluation frequency of affected areas shall be appropriately increased

17.4 Team Composition

The regional QA focal point, management or other qualified personnel not having direct responsibilities in the areas to be evaluated shall perform these program evaluations. Evaluation personnel shall be thoroughly familiar with the applicable requirements, procedures, and standards for the program elements being evaluated

17.5 Reporting of Program Evaluation and Corrective Actions

a. Results of each evaluation shall be documented in a summary report with appropriate recommendations for corrective action and provided to affected managers and supervisors and to the Weapons Program Manager. Discrepancies cited during program evaluations shall be recorded and analyzed for root cause. Evaluation reports shall include, as a minimum:

- 1). time period allocated for correction of deficiencies;
- 2). identification of individual or group responsible for corrective action; and
- 3). status of corrective action progress.

b. Follow-up evaluations shall be conducted as appropriate to assure that corrective and improvement actions are timely and effective for each deficiency. Closeout of deficiencies by responsible organizations shall be recorded and reported.

18.0 TRAINING.

18.1 General.

The activity shall identify training needs to ensure that all personnel are properly trained and possess the technical knowledge, skills, and work guidance necessary to perform assigned tasks. Training programs shall include sufficient formal training to ensure personnel proficiency, including means to measure that proficiency. Training needs shall be periodically assessed to determine requirements for additional training. The activity shall determine and develop or approve criteria for training programs. Physical and visual examinations shall be given to production and inspection personnel on a periodic basis. Appropriate records of training shall be maintained.

18.2 Certification

Management shall identify operations/processes that require specialized skills. Personnel shall be trained, tested and certified before performing these functions. Certification records shall be maintained.

18.3 Explosive Safety Training Program

All personnel involved in technical processing will be certified to work with explosives associated with the applicable weapons program. Department of the Navy explosives safety training and certification requirements are defined in NAVSEA OP 5 Appendix D and COMNAVREGSWINST 8020.2.

19.0 SERVICING. Not applicable for NRSW Weapons Program.

20.0 STATISTICAL TECHNIQUES.

Each activity will gather, display and analyze data as appropriate in order to provide adequate control of processing of weapons systems. Typical metrics for weapons processes include: customer satisfaction survey results, production totals, information on non-conforming material, costs associated with non-conforming material, etc. Display and Analysis of the data will be by simple statistical methods such as bar and line charts, Pareto Analysis, fishbone diagrams, or other means including control charts as directed by management. Analysis results will enable:

- a. Detection of the root causes of deficiencies from handling, refurbishment, alteration, repair, modification, test, calibration, inspection, etc.
- b. Determination of appropriate corrective and preventive action feedback to various phases of the processing/repair cycle. This shall include feedback to external organizations when appropriate.
- c. Determination of the need for specific or special personnel training.
- d. Shop personnel involved in the process to have feedback on the effectiveness of their work in meeting the specified requirements.