



UNITED STATES MARINE CORPS
MARINE CORPS BASE
QUANTICO, VIRGINIA 22134-5001

MCBO 8023.3
B 51
26 Jun 99

MARINE CORPS BASE ORDER 8023.3 Ch 1

From: Commander
To: Distribution List

*Subj: INSTRUCTION FOR THE DEVELOPMENT OF STANDARD OPERATING
PROCEDURES (SOP) FOR AMMUNITION AND EXPLOSIVE OPERATIONS

*Ref: (a) NAVSEA OP 5, VOL 1
(b) NAVSEAINST 8023.11
(c) MCO 8020.10
(d) MCO 3500.27

Encl: (1) Format and Content for SOP
(2) Development and Change Procedures
* (3) Required Elements for SOPs

1. Purpose. To provide policy, guidance and direction for developing and using a SOP for processing expendable (non-nuclear) ordnance aboard MCB, Quantico per references (a), (b), and (c). This is a new Order, requiring total review.

2. Background. The Marine Corps and tenant activities continuously train and deploy with ammunition and explosives. The training and employment of these items is inherently hazardous. Activities shall conduct ordnance processes in the safest manner possible. Each process shall comply with the technical requirements, explosive safety standards, personnel qualification and certification requirements, Marine Corps Occupational Safety and health standards, Federal, state, and local environmental protection requirements, and security and physical security directives.

3. Policy. MCB activities and all tenant activities shall develop written procedures per references (a) and (b) prior to starting any operation involving ammunition or explosives. No process involving explosives will take place without approved, documented procedures. Activities must clearly identify and minimize existing and potential hazards, per reference (d), inherent in processing ordnance or ordnance components. The SOP is the required document by which activities integrate these various items for workers conducting the process.

*4. Information. This Order provides a standard for writing SOPs. The format, content and change procedures are provided in enclosures (1) and (2). Use the checklist in enclosure (3) to ensure SOPs contain all required elements. SOPs are not intended as a substitute for any technical documentation; they should encompass that

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documentation and provide more specific directions tailored to the site where the operation is performed, in sufficient detail to allow the process to be accomplished safely. SOP's are required for both recurring and nonrecurring processes involving handling, transportation, storage, non-emergency disposal and training involving live ordnance.

*5. Scope. This Order applies to all activities where explosives or ordnance are manufactured, handled, transported, or stored. It applies whether the work is performed by Marine Corps or contractor personnel. It also applies to tenant commands, with the exception of the MCAF and Department of Justice activities (FBI, Secret Service, etc.) that are governed by other instructions. This requirement will be incorporated into host/tenant agreements and Interservice Support Agreements where applicable.

6. Action. Commanders/division directors and activity heads are responsible for the development, validation, maintenance, review and approval of SOPs per references (a) and (b).

a. A review of the SOP shall be conducted:

(1) By the immediate supervisor of the process:

(a) Prior to restarting an inactive process

(b) Annually

(2) By the developer of the SOP whenever there is a change or revision to a source document.

b. SOPs expire 4 years from date of approval and require a review of all elements involved in the SOP development. Commanders/division directors and activity heads must approve SOPs prior to reissue.



R. T. BRIGHT
Chief of Staff

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From: Commander
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Subj: DEVELOPMENT OF STANDARD OPERATING PROCEDURES (SOP) FOR
AMMUNITION AND EXPLOSIVES OPERATIONS

Encl: (1) New page inserts to MCBO 8023.3

1. Purpose. To transmit new page inserts to the basic Order.

2. Action

a. Remove the letterhead page, page 2, and enclosure (1), page 5, of the basic Order and replace with the corresponding pages contained in the enclosure.

b. Insert new enclosure (3) in the basic Order.

3. Change Notation. Paragraphs denoted by an asterisk (*) symbol contain changes not previously published.

4. Filing Instructions. File this Change transmittal immediately following the signature page of the basic Order.

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3. Supervisor's Statement. Every process covered by an SOP must have a designated supervisor who is responsible for managing the processes outlined therein. This statement indicates that the supervisor clearly understands his/her duties with regard to the SOP. The supervisor must review the SOP and sign the statement when he/she is first assigned responsibility for an evolution. This requirement also applies to acting supervisors when the regular supervisor is absent. During recurring operations, the supervisor must sign the statement upon his/her annual review of the SOP. A suggested Supervisor's Statement is as follows:

PROCESS SUPERVISOR'S STATEMENT

I have read and understand this SOP. To the best of my knowledge, the operation described herein can be done in a safe, healthful and sound manner. I have made sure all personnel assigned to this evolution are qualified and certified. They have read and understand the requirements of this SOP, and have signed the worker's statement for this process. I will conduct an annual review of this SOP during recurring operation. If deviations from this SOP are necessary, I will ensure that this operation is stopped until the SOP is revised and approved. If unexpected safety hazards are found, I will make sure this evolution is stopped until the hazards have been eliminated.

Supervisor's Name	Date	Supervisor's Name	Date
_____	_____	_____	_____
_____	_____	_____	_____

4. Worker's Statement. This statement indicates that the worker clearly understands his/her duties regarding the processes involving this SOP. The worker must review the SOP and sign the statement to be authorized to train or work under the SOP. An example of a Worker's Statement is as follows:

WORKER'S STATEMENT

I have read, understand and have received the hazard control briefing. I will follow this SOP unless I identify a hazard not addressed in it, or encounter an operation I do not understand. If that occurs, I will stop this evolution and notify my immediate supervisor of the problem.

Worker's Name	Date	Worker's Name	Date
_____	_____	_____	_____
_____	_____	_____	_____

5. Step-by-Step Procedures. These procedures provide the worker with clear and concise step-by-step instructions for performing the operation. Any associated technical manuals and drawings, or other documents defining operations may be attached to this section of the SOP. The relevant sections must not contain extraneous instructions for evolution's not relevant to the SOP. The worker must not be required to leave the work station to locate other references nor jump from section to section in order to perform the process safely and correctly. Documents which form part of the SOP must be reviewed during the SOP development. Changes to these documents must be considered to be changes to the SOP. SOP's may contain technical instructions for which changes are expected to be routine. The SOP must document both the allowable variation limits and the process of approval for such variations within the limits authorized by the SOP.

6. Diagrams

a. Building or Site Diagrams. This is a diagram of the process building or site showing the location of various safety-related items with respect to the work section. Safety related items include fire extinguishers, emergency showers, eye wash stations, first aid kits, spill cleanup kits, etc. Clearly illustrate explosive and personnel limits, evacuation routes and emergency exits. This information may be provided as posted fire bills or spill contingency plans. Posted information will be reviewed concurrently with the SOP.

b. Process Diagrams. This diagram includes information needed to clarify or amplify the information provided in the step-by-step procedures. Often this will take the form of a diagram using locally standardized symbols to indicate steps in the flow of materials through the various operation stages.

7. Equipment Lists

a. Process Equipment List. Provides a list of all the approved tools, equipment, items and supplies (hand tools, gauges, industrial machinery, handling equipment, consumables, etc.) which are or may be used in the process.

b. Safety Equipment List. Provides a list of all the safety equipment (including personal protective equipment) and systems which must be in place and working properly in order to protect the safety of personnel, equipment, facilities and the environment during the evolution.

8. Hazards, Hazard Control and Hazard Control Briefing

a. The SOP shall document all hazards and hazard control methods applicable to the evolution. This information shall form the basis for two types of hazard control briefings. The briefings shall be part of the SOP and records shall be maintained of all briefings conducted.

(1) Type I: All Inclusive. Addresses the process and describes the hazards and control methods that the worker may encounter. Can involve video recordings, computer based instruction and testing and is normally given off-line. Must be given prior to employee assignment as worker or trainee, and is a prerequisite to personnel certification.

(2) Type II. Addresses the operation and work area. Describes the hazards and control methods that the worker will encounter. This "stand up" or refresher briefing may be on-line and is given monthly or when the SOP is changed.

b. The SOP shall:

(1) List and explain the nature of each hazard and hazardous material, using reference (d) as a guide, which may be used, produced or encountered during the evolution and which may have adverse impact on the worker, equipment, facility and environment. Hazardous materials used or consumed in the evolution, life cycle information (raw materials, composition changes, end products, by products and waste) must also be included.

(2) List the measures required to avoid or minimize exposure to each hazard or hazardous material.

(3) List the symptoms which indicate unacceptable exposure of the worker, equipment, facility, or environment to each hazard or hazardous material.

* (4) List the remedial actions required to relieve the immediate symptoms and restore the worker's health should exposure to a hazard or hazardous material occur.

(5) List the actions required to decontaminate and restore the equipment and facility to a safe working condition should exposure to a hazard or hazardous material occur. Where applicable, Material Safety Data Sheet information must be included in the SOP.

(6) Be kept in the work area with the procedures readily available for the use of the worker performing the process.

9. Emergency Response and Contingency Plans. This provides workers with the following information.

a. List each of the accidents or incidents (fire, spill, explosion, runaway reaction, release of hazardous vapors, mechanical failure, injury, etc.) which could occur during an evolution and would require immediate action to control.

b. List a single point of contact that the worker should notify in case of each accident or incident.

c. List initial and followup actions that the worker should take in case of each accident or incident.

10. Security. This provides the worker with all of the requirements necessary to maintain physical security, accountability, and disposition control of expendable ordnance and items, inherent components, hazardous materials, tools and equipment items. It also instructs the worker in measures to prevent unauthorized disclosure of classified information.

DEVELOPMENT AND CHANGE PROCEDURES

1. Development Procedures. SOP's are required for both recurring and nonrecurring processes. Traceability to all developing, review and approval authorities, and source materials will be maintained.

a. Developer produces a draft SOP. The draft SOP is reviewed by all appropriate offices internal to the evolution's activity. While conducting these reviews, offices in the activity should seek technical advice from appropriate offices of outside activities (Naval Safety Center, Technical Center for Explosive Safety, Naval Ordnance Center, etc.). Outside activities may be requested to participate in process validation.

b. In the development of the SOP, if there is a section that does not apply, such as a diagram, then it shall still be listed, but with "N/A" or "not applicable" listed next to it.

c. All SOP's shall be reviewed by appropriate activities in support of the process: Safety, Medical, Environmental, etc.

d. The Base Explosives Safety Officer shall review all SOP's for processes of ammunition and explosives before final approval by the processing activity's commander/division director or activity head.

e. The CO of the processing activity exercises discretion regarding incorporation of the comments and recommendations of outside activities into the SOP and signs the SOP for use at the activity.

2. Change Procedures

a. Developer produces a proposed change to an SOP and the appropriate offices within the activity reviews the proposed change. If necessary, appropriate offices of outside activities are consulted regarding the proposed change.

b. Changes to the SOP are submitted to the CO for approval.

REQUIRED ELEMENTS FOR SOPs

1. Record of Approval
 - a. Developers/Reviewers. Signature/Date.
 - b. Commanding officer approval.
2. Supervisor's Statement (Designated/Acting). Signature/Date.
3. Workers Statement. Signature/Date.
4. Procedures
 - a. Step-by-Step.
 - b. Reference other document(s).
5. Diagrams
 - a. Building or Site
 - (1) Clearly illustrate explosive and personnel limits, evacuation routes, and emergency exits.
 - (2) Safety related items (fire extinguishers, emergency showers, first aid kits, spill cleanup kits, ventilation systems/stations, emergency breathing devices, etc.); or
 - (3) Posted fire bills; or
 - (4) Spill Contingency Plan.
 - b. Processing Diagram. Information needed to clarify or amplify information in paragraph 4 can be diagram using symbols to indicate steps in the flow of materials through the various processing stages.
6. Equipment Lists
 - a. Processing. Approved tools, equipment, items and supplies, etc.
 - b. Safety. Safety equipment, personal protective equipment, systems that must be in place and working properly in order to protect the safety of personnel, equipment, facilities and the environment during the processing.

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7. Hazards, Hazards Control/Hazard Control Briefings

- a. Briefings part of SOP (see record of Hazard Control brief).
- b. Records shall be maintained of each briefing conducted.

(1) Type I. Addresses the process, describes hazards and control methods a worker may encounter. Prior to employee assignment as a worker or trainee; prerequisite to personnel qualification.

(2) Type II. Addresses the operation and work area, describes hazards and control methods worker will encounter. Given monthly or when SOP is changed.

c. Standing Operating Procedures Shall List

(1) An explanation of the nature of each hazard or hazardous material used, produced or encountered.

(2) The measures required to avoid or minimize exposure to each hazard or hazardous material.

(3) The symptoms, which indicate unacceptable exposure of the worker, equipment, facility, or environment to each hazard or hazardous material.

(4) The remedial actions required to relieve symptoms and restore the worker's health if exposed to hazard or hazardous material.

(5) The actions required to decontaminate and restore the equipment and facility to a safe working condition if exposed to hazard or hazardous material.

(6) Where applicable include Material Safety Data Sheet.

8. Emergency Response and Contingency Plans Lists

a. Each accident/incident (fire, spill, explosive, release of hazard vapors, etc.) which could occur.

b. A single POC.

c. Initial ammunition and explosives followup actions that the worker should take in case of each accident/incident.

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9. Security. Requirements necessary to maintain physical security, accountability, and disposition control of ordnance items and components, hazards, tools, and equipment items.