

COMOMAGINST 8023.11A
N3
7 Aug 03

COMOMAG INSTRUCTION 8023.11A

Subj: STANDARD OPERATING PRODUCTION AND PROCESSING PROCEDURES
FOR MINES

Ref: (a) NAVSEA OP 5, Seventh Revision
(b) NAVSEAINST 8023.11
(c) COMOMAGINST 5450.1

Encl: (1) Definitions of Basic Terms
(2) Development and Change Procedures
(3) SOP Format and Content
(4) Sample SOP

1. Purpose. To provide policy and guidance for MOMAG in developing standard operating procedures (SOPs) for producing and processing service and Exercise and Training (ET) mines.

2. Cancellation. COMOMAGINST 8023.11. This instruction is a complete revision and should be read in its entirety.

3. Policy. As directed by references (a) through (c), the capability of MOMAG to support sustained mine assembly and production is paramount. Preplanned events must be properly integrated to ensure the smooth, efficient flow of material. Work simplification has resulted in the development of improved techniques in maintenance and mine assembly. These improvements have enabled MOMAU/MOMAD activities to increase the quantity and type of subassembly components, reduce personnel errors and fatigue, improve procedures, simplify documentation and increase mine assembly rates.

4. Discussion. The objective of this instruction is to ensure these techniques are applied at each MOMAU/MOMAD to achieve maximum mine readiness. Each process will comply with the required technical procedures, explosive safety standards, personnel qualification standards, certification requirements, Navy Occupational and Health (NAVOSH) standards, federal, state and local environmental protection requirements, security and physical security directives. SOPs provide documentation and processing guidance and are not intended as substitutes for technical manuals (TMs), ordnance publications (OPs), ordnance requirements (ORs) or other technical documentation.

5. Scope. This instruction applies to all ordnance processing performed within MOMAG. No task involving processing or handling ammunition or explosives will take place without approved, documented procedures prepared in accordance with this instruction. MK 67 Setting Change and Mine Assembly Teams (MATs) are required to have generic SOPs with deviations in format where noted in this instruction.

6. Security. SOPs are given a classification as needed. All personnel with access to classified SOPs are responsible for having a working knowledge of and for complying with the DON Information Security Program established in SECNAVINST 5510.36. The following guidelines are provided to maintain the security of classified SOPs:

- a. Determine the classification of the SOP prior to any review processing.
- b. Maintain custody of the SOP while it is in your possession.
- c. Never remove parts of the SOP unless authorized to do so by your shop supervisor.
- d. Check the contents of the SOP each time you sign it out to your custody.
- e. Never leave classified SOPs unattended for any length of time. If you are finished with it, return it to the proper storage location.
- f. Be alert to assist other shop personnel in maintaining a high degree of information security.
- g. Be particularly vigilant when visitors are in your work space, especially when they are unescorted.
- h. Violations of security guidelines must be reported to your shop supervisor immediately. Shop supervisors are to report any violations of security not handled and/or resolved at their level to the Security Manager.

7. Equipment. It is each individual's responsibility to ensure the security of conventional Arms, Ammunition and Explosives (AA&E) at all times. Per OPNAVINST 5530.14C and OPNAVINST 5530.13B, the following guidance is established:

- a. AA&E will be removed from secure storage areas for as brief a time as possible and in as small a quantity as practical.
- b. NAVFORM 1250 will be used as the internal record of AA&E issued from magazine storage facilities. This form will list the exact quantity issued/unit of issue. The quantity returned at the end of the operation must match the original quantity issued.
- c. A thorough investigation will be made of missing, lost or stolen AA&E to determine the circumstances and prevent any recurrences.
- d. Any discrepancy noted with AA&E will be promptly reported to your immediate supervisor.

8. Requirements. At a minimum, SOPs will be developed for:

a. Assembly and disassembly of explosive loaded mines, sub-assemblies and components.

b. Maintenance of explosive loaded mines, sub-assemblies and components.

c. Loading and unloading of explosive laden vehicles (trucks, semi-trailers, railcars, Aero 51 trailers, etc.). If this service is provided by the host activity, an agreement delineating the responsibilities of all parties must be documented in a Memorandum of Understanding (MOU) or an Inter-Service Support Agreement (ISSA).

d. Magazine inspections.

e. Operations involving the movement of explosives in and out of magazines and storage.

f. Packing explosive components for shipment to include the proper military standard, weapons requirements or ordnance requirements to use and quality assurance inspection points to perform.

9. Development Procedures. Enclosures (1) through (3) and reference (b) provide guidance for developing standard operating procedures for producing and processing underwater mines. Each activity will develop detailed documentation tailored to each explosive operation process unique to that command. The applicable technical manual or ordnance publication will be used for all recurring processes. The Operations Department will track and maintain the development, review, validation and approval authorities.

10. Definition of Terms. Enclosure (1) provides a list of definitions of terms used in this instruction.

11. Format and Content. Latitude in content is permitted to allow the flexibility to adapt to local requirements. Enclosure (3) provides the minimum requirements for SOP format and content. Enclosure (4) is a sample SOP and will be used with no deviations except as noted in the enclosure. In the event that a section of enclosure (3) is not applicable, that section will contain a notation stating that it is not applicable and a brief reason why. No section will be deleted.

To minimize the bulk of the SOP, management information (time studies, productivity standards, program objectives, etc.) will not be part of or appended to SOPs. These documents should be developed when appropriate, but filed elsewhere.

12. Development and Change Procedures

- a. The Commanding Officer/Officer-in-Charge (CO/OIC) is the approval authority for SOPs.
- b. SOPs will be forwarded to the Safety Department of the host command for review.
- c. All SOPs will be approved using enclosure (2).
- d. The Operations Department is responsible for controlling and monitoring changes to SOPs using enclosure (2).
- e. SOPs will expire four years from the date of approval, at which time they must be reviewed by all elements involved in the development of the SOP.
- f. SOPs will be reviewed at the following times:
 - (1) By the originator whenever there is a change or revision to a source document.
 - (2) By the supervisor of the process prior to restarting an inactive process.
 - (3) At a minimum annually.

13. Validation Procedure. All SOPs will be validated through a demonstration that ensures the process will result in a safe, effective and efficient operation. As long as that SOP is current, a record of all validations will be maintained.

14. Action. The CO/OIC of each MOMAU/MOMAD will:

- a. Ensure full compliance with this instruction and reference (b).
- b. Issue an activity instruction (or update existing one) on SOPs that delineates the activity's process for executing this instruction. The instruction will document the responsibility for developing, validating, maintaining and reviewing SOPs and SOP approval authority.
- c. Ensure all active processes will have SOPs in accordance with this instruction. Use of Special Job Procedures (SJPs), Depot Maintenance Work Requirements (DMWRs), local operating procedures, etc., as stand-alone documents are not authorized.
- d. Issue a command notice listing all SOP's issued by that activity. The notice will at a minimum reflect:

- (2) SOP title
- (3) Date of approval
- (4) Current status (active or inactive)

/s/
T. W. AUBERRY

Distribution:
COMOMAGINST 5216.1T
List I
List II (Case A, Case B (COMINEWARCOM only))
List III

All-Up Round: A complete round containing all of the explosives, materials and components designed for a specific function.

Commanding Officer/Officer-in-Charge: The Commanding Officer/Officer-in-Charge has final responsibility for safety of the activity. Where host tenant agreements or Inter-Service Support Agreements are in effect they will clearly document the responsibilities of the activities with regard to SOP development, review and approval.

Component: Any part of sub-assembly of an all-up round that contains or is comprised of an explosive. Examples include fuses, boosters, primers, detonators, warheads, explosive separators, etc.

Expendable Ordnance: Ordnance end items (non-nuclear) defined in SPCCINST 8010.1 series with cognizance symbols OT, 2D, 2E, 2T, 4E, 4T, 6T, 8E, 8S, 8T, and 8U. This includes underwater mines, land mines, grenades, gun ammunition, demolition materials, pyrotechnics, guided missiles, bombs, rockets, torpedoes, etc.

Explosive: A solid or liquid substance (or a mixture of substances) that is in itself capable, by chemical reaction, of producing gas at such temperature, pressure and speed that it can cause damage to the surroundings. Included are pyrotechnic substances even when they do not evolve gases. The term explosive includes all solid and liquid materials known as high explosives, propellants and pyrotechnics, e.g., illuminant, smoke, delay, decoy flare and incendiary compositions, together with igniters, primers and initiators.

Operation: Any action to be performed on or to an ordnance item or component. Normally a series of operations is considered to be a process, but a single operation may be a process if it is the only action performed at the time.

Procedure: A series of steps following in a regular, definite order.

Process: Any operation or series of operations related to manufacture: explosive loading, assembly, and packing (LAP); maintenance, reconditioning, renovation, rework and repair; modification and conversion; Receipt, Storage, Segregation and Issue (RSS&I); demilitarization; disposal; handling, shipping, loading and unloading; or Research, Development, Test, and Evaluation (RDT&E) of ordnance end items or inherent components.

Recurring Process: A process that is well developed and intended to be performed by a constant set of procedures. All processes intended to result in or contribute to items for fleet issue are considered to be recurring processes.

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Review: The process of technical consideration and assessment of the content of the document by appropriate activities. For an SOP, the

initial review or the review after the expiration of a major change should include:

a. Authorities aware of the technical requirements of the process (program manager, In-Service Engineering Agent (ISEA), local engineering).

b. Authorities responsible for local support of the process (operating force, public works, supply, publications or administration).

c. Safety, medical and environmental authorities.

d. The chain of command.

The operating supervisor should conduct annual reviews with the operators. The supervisor should request assistance from other authorities when needed.

SOP Validation: SOP validation is a demonstration that the SOP is correct and will result in a safe, effective and efficient operation. All validations will be documented. If possible, inert material will be used for validations. Process validations performed per NAVSEA OD 46574B include SOP validation.

Standard Operating Procedure (SOP): The required document by which a MOMAU/MOMAD provides detailed, step-by-step instructions for conducting safe mine processing on explosive components. The SOP integrates the following factors:

- Technical requirements
- Explosive safety standards
- NAVOSH standards
- Federal, state and local environmental protection standards
- Security and physical security directives

Technical Requirements: Those requirements stated in the official technical data package for an item. This includes technical manuals, drawings, specifications, etc. They are the responsibility of program managers.

Work Area: The area immediately surrounding the operators performing a process. An SOP will be located in the work area so any and all operators can easily refer to the SOP for direction. No work area is larger than the buildings in which the process is performed. In buildings with many bays in which different processes are performed, each bay is a work area.

1. Development Procedures. SOPs are required for both recurring and non-recurring processes. A history of developing and reviewing source materials and approval authorities will be maintained.

a. The developer produces a draft SOP. All appropriate offices integral to the processing activity review the draft SOP. While conducting these reviews, offices in the activity should seek technical advice from appropriate offices in outside activities, e.g., Navy Environmental Preventive Medical Unit, Centers of Excellence, Design Agent (DA), In-Service Engineering Agent (ISEA), Naval Safety Center (NAVSAFECEN), Naval Ordnance Safety and Security Activity (NOSSA), Indian Head, MD, Fleet Technical Support Center, Pacific (FTSCPAC), Fleet Technical Support Center, Atlantic (FTSCLANT), etc. Outside activities may be requested to participate in process validation.

b. The CO/OIC of the processing activity exercises discretion regarding incorporation of the comments or recommendations of outside activities into the SOP.

2. Change Procedures

a. The developer produces a proposed change to an SOP. Appropriate offices within the processing activity will review the proposed change to the SOP. If necessary, appropriate offices in outside activities are consulted regarding the proposed change. At a minimum, the change must be routed through those offices listed on the original record of approval page.

b. The CO/OIC of the processing activity signs the change to the SOP.

c. A copy of the change transmittal will be attached to the SOP record of approval page.

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SOP FORMAT AND CONTENT

Each SOP shall contain the following:

1. Record of Approval. This record contains spaces for the signature and date by personnel internal to the processing activity who developed or reviewed the SOP and provides a space for the CO/OIC's approval. The record of approval sheet may have appropriate offices added as applicable.

2. Supervisor's Statement. Every explosive process covered by an SOP must have a designated supervisor who is responsible for the operation. This statement indicates that the supervisor clearly understands the duties with regard to the SOP. The supervisor must review the SOP and sign the statement when first assigned responsibility for a process. This requirement also applies to acting supervisors when the regular supervisor is absent. During recurring processes, the supervisor must sign the statement upon annual review of the SOP.

3. Worker's Statement. This statement indicates that the worker clearly understands the duties regarding the operations in the SOP. The worker must review the SOP and sign the statement to be authorized to train or work under the SOP.

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

5. Hazards, Hazards Control and Hazard Control Briefings

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

(1) Type I: All inclusive. Addresses the process and describes the hazards and control methods that the worker may encounter. May involve video recordings and computer-based instruction. Testing and is normally given off-line.

(2) Must be given prior to being assigned as worker or trainee and is a prerequisite to personnel certification.

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

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b. The SOP will:

(1) List and explain the nature of each hazard and hazardous material which may be used, produced or encountered during the processing and which may have an adverse impact on the worker,

equipment, facility or the environment. For hazardous materials used or consumed in the processing, life cycle information, e.g., raw materials, composition changes, end products, by-products and waste, must be included.

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

(3) List the symptoms that indicate unacceptable exposure of the worker, equipment, facility or the 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 an unacceptable 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 an unacceptable hazard or hazardous material occur. Where applicable, Material Safety Data Sheet (MSDS) information must be included in the SOP.

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

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

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

c. Lists initial and follow-up actions that the worker should take in case of an accident or incident.

7. Equipment Lists

a. Processing Equipment List. Provide a list of the approved tools, equipment, items and supplies (hand tools, power tools, gauges and meters, industrial machinery, industrial handling equipment, consumables, etc.) that are or may be used in the processing. Refer to the applicable job sheet number in the technical manual for additional information.

b. Safety Equipment List. Provide a list of the safety equipment, including personal protective equipment, and 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. Refer to applicable job sheet number or technical manual for additional information.

8. Step-by-Step Procedures. Provides the worker with clear and concise step-by-step instructions for performing the process. The worker performing the process will keep the SOP in the work area with the procedures readily available for use. Special Job Procedures, Depot Maintenance Work Requirements, operating procedures, Inter-Service Engineering Agent technical manuals and drawings or other documents defining operations may be referred to in this section but must specifically detail the applicable job sheet or chapter. Any deviations or additional requirements must be addressed in this section.

a. The relevant sections must not contain extraneous instructions for processes not relevant to the SOP.

b. The worker should not be required to leave the work station to locate other references nor jump haphazardly from section to section in order to perform the process safely and correctly.

c. Documents that form part of the SOP must be reviewed during SOP development.

d. Changes to these documents must be considered to be changes to the SOP.

9. Diagrams

a. Building or site diagram. This is a diagram of the processing building, site or magazine movement/loading/unloading showing the location of various safety-related items with respect to the work station. Safety-related items include fire extinguishers, fire suppression systems, eye wash stations, emergency showers, first aid kits, spill clean-up kits, ventilation systems or stations, emergency breathing devices, etc. List explosive and personnel limits, illustrate evacuation routes and emergency exits. This information may be posted fire bills or spill contingency plans. Posted information will be reviewed concurrently with the SOP.

b. Processing Diagram. 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 processing stages.

c. Diagrams for afloat or forward deployed teams are not required due to the multitude of different work site environments that may be used.

SAMPLE STANDARD OPERATING PROCEDURE (SOP)

Subj: HAZARD CONTROL BRIEFING - TYPE I (GENERAL)

(NOTE: This is only a sample briefing. The actual one should be tailored for each activity).

1. Introduction. This general hazard control briefing addresses the process/operation and describes the hazards and control methods the operator may encounter.

a. No personnel will be assigned to work within the scope of this SOP prior to receiving this general hazard control briefing.

b. The hazard control briefing will be repeated quarterly.

c. During all ammunition and explosives handling procedures, safety must be the first consideration. All functions will be reviewed for applicable safety instructions prior to the start of operations. At no time will safety instructions or devices (lock-outs, barriers, safety hooks, etc.) be violated or by-passed.

NOTE: Flagrant disregard of safety precautions, reckless operation of explosive material, ordnance or device handling equipment or other behavior indicating incompetence or unreliability will be cause for mandatory suspension of certification. The immediate supervisor will then ensure the individual is appropriately related before recertification can be granted. Recertification will be by an appearance before the certification board when retraining is complete, and behavior is satisfactory.

d. Trainees, newly reported command personnel or Active Duty for Training (ACDUTRA) reserve personnel will not be permitted to work alone. Assignments will be made to ensure they are paired with experienced workers. Supervisors will inspect work frequently to ensure it is being performed safely, efficiently and correctly.

2. General Safety Information

a. Good housekeeping is essential to a safe operation. The supervisor will ensure the working areas are clean and free of debris.

b. Explosives, ammunition, or other materials will be handled carefully to avoid obliteration or defacement of identification markings.

c. Food will be consumed in designated areas only. No food or drink will be located or consumed in the area of explosive operations or by persons who are engaged in handling or stowing ammunition.

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d. No horseplay will be tolerated at any time during explosive operations. All injuries, no matter how insignificant, will be reported immediately to the work center supervisor.

e. Smoking is strictly forbidden except in designated areas. No matches or spark/flame producing devices are permitted in any explosive handling or stowage area.

f. Regardless of authorized maximum explosive limits, the amount will be restricted to the smallest quantity required to ensure uninterrupted operations.

g. Department of Transportation Interstate Commerce Commission placards will be secured on each Navy or commercial vehicle immediately prior to loading and at all times while the carrier is loaded with ammunition or explosives. They will be removed immediately after the carrier is off-loaded.

h. Material handling equipment and portable ordnance handling equipment beams will be inspected prior to their use to ensure they have the correct load capacity, a valid test date and are serviceable. Items failing this inspection will be red tagged and removed from service. MHE will be maintained in compliance with NAVSEA SWO23-AH-WHM-010 and applicable sections of OP-5, Volume 1.

i. Prior to entering or off-loading MHE, the wheels of vehicles will be properly checked.

j. All MHE operators must be certified, will be knowledgeable of and comply with the safety regulations pertaining to forklifts. MHE will never be loaded beyond its maximum capacity.

k. Loading or unloading motor vehicles containing ammunition or explosives during electrical storms is prohibited.

l. Ordnance operations will terminate when an electrical storm approaches within five miles of the activity.

m. Only authorized personnel will be permitted to perform repairs, adjustments and maintenance on equipment and machinery.

SAMPLE STANDARD OPERATING PROCEDURE (SOP)

Subj: HAZARD CONTROL BRIEFING - TYPE II (SPECIFIC)

(NOTE: This is only a sample briefing. The actual one should be tailored for each activity).

1. Introduction. This hazard control briefing addresses the process/operation and describes the hazards and control methods the operator will encounter.

a. No personnel will be assigned to work within the scope of this SOP prior to receiving this briefing.

b. The hazard control briefing will be repeated prior to each operation.

c. During all ammunition and explosive handling procedures, safety must be the first consideration. All functions will be reviewed for applicable safety instructions prior to the start of operations. At no time will safety instructions or devices (lock-outs, barriers, safety hooks, etc.) be violated or by-passed.

NOTE: Flagrant disregard of safety precautions, reckless operation of explosive material, ordnance or device handling equipment or other behavior indicating incompetence or unreliability will be cause for mandatory suspension of certification. The immediate supervisor will then ensure the individual is appropriately related before recertification can be granted. Recertification will be by an appearance before the certification board when retraining is complete, and behavior is satisfactory.

d. Trainees, newly reported command personnel or Active Duty for Training (ACDUTRA) reserve personnel will not be permitted to work alone. Assignments will be made to ensure they are paired with experienced workers. Supervisors will inspect work frequently to ensure it is being performed safely, efficiently and correctly.

2. Specific Safety Information. Include any site specific and operation specific precautions.

SAMPLE STANDARD OPERATING PROCEDURE (SOP)

Subj: EMERGENCY RESPONSE AND CONTINGENCY PLAN

(NOTE: This is only a sample briefing. The actual one should be tailored for each activity.)

1. Shop supervisors must ensure all personnel are aware of incidents which may occur during processing and which may require immediate action.

a. Incident: Fire

Point of contact: Supervisor

Initial action: Yell "fire, fire, fire" and send someone to spread the word. Notify the Fire Department at 9-1-1. Give the Fire Department the type and location of the fire and the current condition. If possible, designated fire teams will muster in the compound to fight the fire until relieved by the Fire Department. If this is not possible, clear the area.

Follow-up action: Determine the cause of the fire and eliminate hazardous condition. Provide a written report of the circumstances to the Safety Officer.

b. Incident: Explosive accident/incident, with or without detonation.

Point of contact: Supervisor for notification of required personnel

Initial action: Do not disturb the area. Secure the area. Notify the supervisor. Request the necessary assistance, i.e., an ambulance, EOD personnel, the Fire Department. If there is immediate danger, clear the area and wait for assistance.

Follow-up action: Provide a written report of the circumstances. Determine the cause and attempt to eliminate the hazard.

c. Incident: Personal Injury or Medical Emergency

Point of contact: If in the field, contact the command via the nearest landline or send an assistant for help. If in the command, contact the supervisor. Advise the supervisor of the situation and request medical support.

Initial action: Send for help. Assess injuries and provide first aid until help arrives. Do not move the injured personnel unnecessarily.

Follow-up action: Determine the cause of the incident and eliminate it, if possible. Provide a written statement to the Safety Officer.

d. Incident: MHE Mechanical Failure

Point of contact: If in the field, contact the Transportation Division. If in the command, contact the supervisor.

Initial action: Red tag the MHE. Report it and request a replacement.

Follow-up action: Not required after the replacement is received.

e. Incident: Hazardous Material Spill

Point of contact: Supervisor or the Hazardous Material Coordinator

Initial action: Contain the spill. Remove all sources of ignition and ventilate the area. Mop up spills with an inert absorbent material.

Follow-up action: As required by the command Hazardous Material Coordinator. Determine the cause of the spill and remove the hazard.

f. Incident: Accidental withdrawal of lanyard on S&A MK 45 during assembly or disassembly

Point of contact: Supervisor or EOD personnel

Initial action: If the lanyard is accidentally withdrawn from both the firing pin and hydrostatic piston housings during assembly or other handling operations, flight gear deployment will occur within one second. The safety bar will contain the deployment.

(1) Clear the immediate area of all non-essential personnel

(2) Notify EOD personnel

(3) While waiting for the arrival of EOD personnel and if the lanyard or arming wire is successfully installed in the hydrostatic piston housing, move the mine to an isolated area. If the lanyard is accidentally withdrawn from the firing pin of thermal battery MK 134 Mod 0 only, secure the lanyard to prevent withdrawal from the hydrostatic piston housing. Complete steps 1-3 above.

Follow-up action: Determine the cause of the incident and eliminate it if possible. Provide a written statement to Safety Officer.

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STEP-BY-STEP PROCEDURES

1. Step-by-step procedures include:

a. Procedures or operations leading up to the commencement of the respective assembly, disassembly or maintenance manual, work requirement or military standard requirements.

b. Deviations from ordnance publication procedures.

c. All quality assurance and supervisor or "red hat" hold/check points.

d. Which ordnance publication job sheet steps are performed at what stations during the weapon assembly or disassembly process.

e. Procedures for processing the end product.

2. All quality assurance, supervisor or "red hat" check points will be bolded.

3. Shop Travelers will be attached to step-by-step procedures. They will include all quality assurance hold/check points.

EQUIPMENT LIST
MINE MK 65 UPGRADE
SPECIFIC STATION PROCEDURES

PROCESSING EQUIPMENT LIST

Station Tool Box Inventory:

(List in two columns all equipment, tools and consumables required to complete the operation. May refer to the applicable job sheet in the ordnance publication.)

cart, tool (1)	creeper, mechanics (1)
cloth, cleaning (4)	thumbscrews, (f/tail section) (4)
ratchet, 3/8" drive (2)	socket, 3/16" x 3/8" drive (2)

HAZMAT Requirements:

(List in a column all Hazmat consumables required to complete the operation. May not refer to the applicable job sheet in the ordnance publication.)

grease, pneumatic systems, MIL-G-4343
alcohol, denatured

Safety Equipment:

(List in a column all safety equipment required to complete the operation. May not refer to the applicable job sheet in the ordnance publication.)

hearing protection

(NOTE: This is only a sample listing. The actual one should be tailored for each activity.)

MHE/WEAPONS HANDLING GEAR REQUIREMENTS:
Forklift

Dolly, weapon, MK 11 Mod 1 (1D00027)
Carrier, weapons, MK 55 Mod 0 or 1 (1C00527) or (1C00528)

STATION TOOL BOX INVENTORY:

Attachment, internal-soc, 1/4 x 3/8 dr (7A00091) (2 ea)
Attachment, internal-soc, 5/16 x 3/8 dr (7A00098) (2 ea)
Attachment, internal-soc, 5/32 x 3/8 dr (7A00092) (2 ea)
Handle, rev-ratchet, 3/8 dr (7H00026) (2 ea)
Handle, speeder, socket wrench, 3/8 dr (7H00087) (2 ea)
Sockets, 12-pt, reg lg, 7/16 x 3/8 dr (7S00269) (2 ea)
Sockets, 12-pt, deep lg, 1/2 x 3/8 dr (7S00269) (2 ea)
Screwdriver, 3/8 x 8 blade (2 ea)
Pliers, diagonal-cut, plain, 6L (7S00058) (2 ea)
Scrib (2 ea)
Adapter, soc wrench, 1/4M dr x 3/8F dr (2 ea)
3/8 impact gun

SAFETY EQUIPMENT:

Hard hat
Gloves
Ear protection

HAZMAT REQUIREMENTS:

Grease, pneumatic systems, MIL-G-4343

OTHER EQUIPMENT REQUIRED:

Torque wrench, 0-50 lb-in, 1 ea
Air hose (25 ft)
Thumbscrews (5 ea)

SHOP TRAVELER MK 65 FOXTROT TO ALPHA

Work Order Number _____ Mine Control Number _____

STATION 1

TECHNICIAN/QA INSPECTOR

1. TAIL SECTION INSPECTED TO ENSURE
IT IS A MK 7 MOD 1.

_____/_____

2. MINE CASE INSPECTED TO ENSURE YELLOW

DOTS ARE LOCATED ON FORWARD END OF MINE CASE (4 EA AT 45 DEGREE ANGLES PER NAVSEA SW551-AA-MMI-010).

_____/_____

3. THERMAL COATING ON MINE CASE INSPECTED FOR DAMAGE.

_____/_____

4. GROUND MINE CASE. THUMBSCREW INSTALLED IN MK 7 TAIL SECTION.

_____/_____

5. NOSE FAIRING INSPECTED AND IS NOT DAMAGED AND DOES NOT HAVE CRACKS AROUND FAIRING MOUNTING HOLES (REPLACE IF DAMAGED). TORQUE THREE MOUNTING SCREWS TO 35+5 LB-IN OF TORQUE.

_____/_____

6. SUSPENSION LUGS REMOVED, LUBRICATED AND REINSTALLED IN MINE CASE. BOTTOM OUT LUGS UNTIL LUGS BOTTOM OUT AND BACK-OUT THREE TURNS OR UNTIL BOTTOM OF LUG EYE IS FLUSH WITH MINE SURFACE, WHICHEVER IS SMALLER.

_____/_____

Shop Supervisor Signature

SOP RECORD OF APPROVAL

Subj: MINE MK 65 UPGRADE

(Annual review or 30-day reactivation within the four-year life cycle. Indicate the type as appropriate.)

1. Production Department Head. Having read and validated this SOP, I recommend it's approval/disapproval for use.

DH Signature

date/type

DH Signature

date/type

2. Mine Assembly Officer. Having read and validated this SOP, I recommend it's approval/disapproval for use.

MAO Signature date/type MAO Signature date/type

3. CO/OIC. I concur/do not concur and approve/disapprove the use of this SOP.

CO/OIC Signature date/type CO/OIC Signature date/type

4. Host command Explosive Safety Officer. Having read and validated this SOP, I recommend it's approval/disapproval for use.

ESO Signature date/type ESO Signature date/type

SUPERVISOR STATEMENT

I have read this standard operating procedure (SOP). I understand it. To the best of my knowledge the process described within this SOP may be competed in a safe, healthful and environmentally sound manner. I have made sure all persons assigned to this process are qualified, 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 as indicated by my signature below. If deviations from this SOP are necessary, I will ensure this process is stopped until the SOP is revised and approved. If unexpected

safety, health or environmental hazards are found, I will make sure this process is stopped until the hazards have been eliminated.

Supervisor's Signature and Date

Supervisor's signature	Date

Annual Review

Supervisor's signature	Date

NOTE: On the fourth annual review, the SOP will be reviewed in its entirety and reissued by the CO/OIC.

WORKER'S STATEMENT

I have read this SOP and I have received the hazard control/safety briefing. I understand them. 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 process and notify my immediate supervisor of the problem.

Worker's Signature and Date

Worker's Signature	Date



