

WEAPONS CLEANING

1. Version, Date. 1, 6 June 2012

2. Purpose. This Environmental Standard Operating Procedure (ESOP) summarizes the procedures implemented for the minimization, management and disposal of waste associated with weapons cleaning at Marine Corps Base, Quantico (MCBQ). These procedures are implemented to minimize the potential impact to the environment and reduce risk to personnel responsible for cleaning weapons.

3. Applicability

a. Audience. This ESOP is directed towards individuals who perform any of the operations described herein. All personnel aboard MCBQ shall take responsibility to follow the procedures contained within this ESOP. This ESOP does not apply to personally owned firearms used for hunting or home security.

b. Scope. These procedures apply to the routine operation of weapons cleaning aboard MCBQ. Procedures are provided as separate ESOPs for: Hazardous Material Storage Area - Hazardous Material Management (ESOP #3); Degreasing Solvent (Parts Washer) (ESOP #7); Hazardous Waste - Satellite Accumulation Areas (ESOP #28), and; Bluing and Parkerizing (ESOP #34).

4. Definitions. The following definitions are provided to support this procedure:

a. Aqueous Cleaners. Water based solutions that are pH neutral or alkaline that removes dirt from part surfaces. Semi-aqueous solutions are water based solutions that contain small amounts of solvents.

b. Cleaner, lubricant, and preservative (CLP). Only CLP meeting MIL-PRF-63460D is allowed for weapons maintenance involving simple cleaning.

c. Parts Washer. Equipment to clean parts and components as part of a manufacturing or maintenance operation. Parts washers include cold cleaning units, vapor degreasers and conveyORIZED degreasers. Parts washer cleaning solution can be solvent or aqueous based cleaners.

d. Solvents. Solutions used to clean by dissolving away dirt. Solvents can be petroleum-based products such as mineral spirits, Stoddard solvent, and petroleum naphtha, and organic products such as trichloroethane, trichloroethylene, benzene, and xylenes.

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e. Personal Protective Equipment (PPE). Equipment provided to shield or isolate a person from chemical, physical, and thermal hazards that can be encountered when using hazardous materials.

f. Material Safety Data Sheet (MSDS). A form, provided by manufacturers and compounders (blenders) of chemicals, containing information about chemical composition, physical and chemical properties, health and safety hazards, emergency response and waste disposal of the material.

g. Weapons Cleaning. Cleaning of firearms (e.g., pistols, shotguns, rifles, heavy machine guns, and crew serve weapons) using patches, q-tips, brushes, and CLP; as well as aqueous or solvent based parts washer use. Does not include trailer mounted artillery or armored vehicles

5. Responsible Parties. Organizations and personnel listed below are responsible for implementing the procedures described in this ESOP:

a. 4th Light Armored Reconnaissance (LAR) Battalion, (Building 26100).

b. G-4, Material Readiness Branch (MRB) Ordnance Maintenance Section (OMS), (Building 3045).

c. Headquarters and Service Battalion (HQSVCBN), (Building 2006 & 2006A).

d. Marine Corps Air Facility (MCAF), (Building 2110).

e. Marine Corps Embassy Security Group (MCESG), (Building 2007), and the newly constructed facility located in the Guadalcanal Area when government accepted and occupied.

f. Marine Corps Systems Command (MCSC) Ordnance Test Facility, (Building 2247).

g. Officer Candidates School (OCS) and OCS Armory, (Buildings 5001, 5002, 2118).

h. Security Battalion (SECBN) Quantico Provost Marshall's Office (PMO), (Building 2043).

i. The Basic School (TBS) Armory, (Building 24006).

j. Senior Non-Commissioned Officer (SNCO) Academy - Armory.

k. Weapons Training Battalion (WTBN), WTBN Precision Weapons Section (PWS), (Building), 27250.

l. WTBN, WTBN S-4, (Building 27211).

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m. G-5, Installation and Environment Division, Natural Resources and Environmental Affairs (NREA) Branch, Environmental Compliance Section.

6. Procedures for Weapons Cleaning (Instructions for Operational Control). This section describes the processes and requirements for weapons cleaning. Weapons cleaning can be performed manually or by aqueous or solvent based parts washers. As stated in paragraph 3.b, procedures for using solvent-based parts washers (to clean weapons parts) are provided as a separate ESOP (Degreasing Solvent [Parts Washer]). Therefore, this ESOP focuses on weapon cleaning manually and by aqueous-based parts washers.

a. Manual weapons cleaning involves the use of CLP. Only CLP meeting MIL-PRF-63460D is allowed for weapons maintenance involving simple cleaning. CLP meeting this performance specification is not hazardous (i.e., does not contain constituents that would make this material a hazardous waste when it is no longer usable). All CLP containers should be inspected to ensure their date of manufacturing is after December 1993 and is compliant with MIL-PRF-63460D. CLP manufactured prior to this date may contain hazardous constituents such as barium sulfonate and trichloroethylene (TCE). Procedures for weapons cleaning using CLP are summarized as follows:

(1) Select a clean area to place all weapons components (use rags, empty sand bags, or like materials to create a clean surface).

(2) Clear the weapon and remove the magazine; remove the sling.

(3) Disassemble the weapon.

(4) Use a scrub brush to remove all dust, mud, sand, debris and carbon located on the exterior of the weapon.

(5) Use a scrub brush or rags to remove all the dust, mud, sand, carbon and debris located on all interior components of the weapon.

(6) Using the bore brush, the bore chamber brush, and issued weapon cleaning tooth brush begin scrubbing of all the exterior metal parts of the weapon. With a clean cloth, wipe off all excess CLP. Use pipe cleaners to clean hard-to-reach areas.

(7) Upon completion of exterior parts cleansing, begin cleaning all interior parts using the same procedure. Use the cleaning rod, cotton swabs, bore brush, and chamber brush to clean the interior parts of the barrel and chamber of the upper receiver. It is very important to remove all accumulated carbon or dirt from the chamber, locking lugs, the bore of the barrel, and all exterior and interior parts/components of the bolt carrier group. Use pipe

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cleaners to clean hard-to-reach areas. (Do not use Q-tips; they will leave fabric residue, which will interfere with the normal function of the weapon).

(8) Apply a coat of CLP to internal weapon components (including the interior of the barrel) in accordance with applicable technical reference manuals/instructions specific to the weapon being cleaned.

(9) Apply a generous coat of CLP to all exterior metal parts of the weapon.

(10) Use a scrub brush or a clean, damp piece of cloth to cleanse hand guard and all other plastic parts of the weapon.

(11) Re-assemble the weapon.

(12) Dispose items that have come in contact with CLP (e.g., rags, pipe cleaners, and other non-reusable items) in specified hazardous materials receptacles. Do not mix CLP-contaminated materials with general office/workspace garbage. Refer to the Hazardous Material Storage Area - Hazardous Material Management ESOP for further instructions.

b. Aqueous-based parts washing machine operators must implement the following operating and maintenance (O&M) instructions. Additionally, these instructions will be posted on the side of the machine.

(1) The following operating instructions must be implemented when using an aqueous based parts washing machine.

(a) Before operating the parts washer, operators must completely familiarize themselves with the instruction manual. Only authorized and properly instructed individuals may operate the machines.

(b) Before loading the machine, ensure the pump is off, the machine is at operating temperature, and the system light is on.

(c) Latch the machine door open and place articles to be cleaned on the turntable. Ensure no parts protrude through the bottom or beyond the sides of the turntable.

(d) Close door and latch securely, with machine set to wash, turn timer to desired cleaning time. The machine pump will start and run until time has expired.

(e) For machines with an optional rinse, select the rinse cycle and turn the timer to the desired rinse time. Rinsing will start and run until time has expired. Ensure a diverter overflow valve is open to avoid overfilling the machine.

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(f) After washing is completed, wait for drainage to complete before opening the door.

(2) The following maintenance instructions will be implemented on aqueous-based parts washing machines. These instructions are based upon average use. Higher usage may require more frequent maintenance. Always shut the system off before draining the tank. Only qualified individuals may service this machine.

(a) On a daily basis: check the water level every four hours, it should be at the bottom of the screen; clean the screen by removing it and rinsing; check for plugged nozzles, remove and clean them; and, reinstall them in exactly the same position.

(b) Implement Hazardous Waste Satellite Accumulation Area Procedures (refer to Hazardous Waste - Satellite Accumulation Areas ESOP [ESOP #28]) for materials (e.g., lead) drained out of the parts washer.

(c) On a weekly basis: grease the pump motor bearings; change the cleaning solution as required; and, heating coils should be cleaned thoroughly when the tank is empty. Avoid damaging the heating coils when cleaning the tank.

(d) On a monthly basis, grease the door hinge bearings and check the condition of the turntable chain.

7. Inspection and Corrective Action

a. The NREA Branch, Environmental Compliance Section will inspect the aqueous-based parts washers on a monthly basis, as specified in the Hazardous Waste - Satellite Accumulation Area ESOP (ESOP #28).

b. Perform corrective actions needed to correct the problem(s) for all identified deficiencies.

c. Update procedure to reflect any changes related to Base parts washers.

8. Internal Communication

a. Report newly purchased, relocated, or otherwise acquired parts washers to the NREA Branch, Environmental Compliance Section. Do not relocate a parts washer or begin operation of a new parts washer without first consulting the NREA Branch, Environmental Compliance Section to ensure environmental considerations are followed.

b. Report non-compliance with posted operating procedures to Parts Washer Operators and then to Shop Supervisors and document non-compliance with the NREA Branch, Environmental Compliance Section.

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c. Discuss and review the procedure and post changes to the procedure as needed.

d. Post procedure and communicate changes with the Parts Washer Operators and Shop Supervisor.

9. Training/Awareness

a. Based on the Training Needs Analysis, the Comprehensive Environmental Training and Education Program (CETEP) Coordinator and Command Environmental Coordinators (ECs) will identify personnel requiring training on general use practices of parts washers. In between courses, NREA may provide additional guidance by request.

b. Parts Washer Operators and Shop Supervisors receive training on applicable provisions of this ESOP.

10. Emergency Preparedness and Response

a. Parts Washer Operators will immediately clean up minor spills that occur during operation of the parts washer using wipe rags and other absorbent material. Place wipe rags or other absorbent materials in closed and labeled containers for subsequent management.

b. Parts Washer Operators should maintain adequate spill response materials near the parts washer and spill mats for floor drains, where applicable.

c. Notify your supervisor of spills that cannot be controlled and immediately contact the MCBQ Fire Department (911) followed by the NREA Branch, Environmental Compliance Section (784-4030).

11. References and Related Documents

a. MCBQ ISMP.

b. ESOP #3, Hazardous Material Storage Area - Hazardous Material Management.

c. ESOP #7, Degreasing Solvent (Parts Washer).

d. ESOP #28, Hazardous Waste - Satellite Accumulation Areas.

e. ESOP #34, Bluing and Parkerizing.

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12. Document Revision History

The following provides a history of revisions of this ESOP:

Revision Number	Date	Revision Made By	Section	Page	Summary of Change and Reason	Signature

13. Document Owner. This document has been reviewed and approved by the practice owners. Should the practice change, resulting in a need to modify this ESOP, practice owners will notify the NREA Branch, Environmental Management System Section at 432-0525.

a. Document Owner. NREA Branch, Environmental Compliance Section.

b. Document Approval. Chair, E²MS Implementation Team.