

Environmental Standard Operating Procedure	
Acid Cleaning	
SF Director: Alicia Florez Signature:	Date:

PURPOSE.

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for acid cleaning or chemical treatment. This guidance applies to those individuals who perform acid cleaning or chemical treatment aboard Marine Corps Logistics Base (MCLB) Barstow.

PROCEDURES.

The Marine Corps mission requires very high levels of corrosion resistance from the metal parts used in its small arms and related gear. Various chemical treatment processes at MCLB Barstow utilize hazardous chemicals such as hydrochloric acid and magnesium phosphate to promote corrosion resistance. These chemicals impact air quality and must be handled properly to avoid impacts to human health and the environment. Potential hazards to humans include chemical burns through inhalation or contact with the skin or eyes. To minimize these potential health hazards, the chemical process tanks use negative pressure vapor collection hoods, which must be operated whenever chemical agents are present in open tanks. (Note: Chromium is not used).

The following procedures apply:

1. Maintain Safety Data Sheets (SDS) for all materials associated with this practice.
2. Ensure that current permit to operate (PTO) is posted in an accessible area.
3. Ensure that records of all required training and certifications are current and available for inspection.
4. Wear appropriate personal protective equipment (PPE) such as eye protection, chemical-resistant gloves, coveralls, apron and steel-toed boots, as necessary.
5. Keep fire extinguishers and spill kits readily accessible and near potentially hazardous areas.
6. Ensure eyewash station and safety shower is readily accessible near potentially hazardous areas and is in good operational condition.
7. Ensure that all equipment is maintained and kept in good operating condition at all times.

8. Verify that the vapor collection system is on whenever chemical agents are present in the tanks and the tanks are in use. Chemical process tanks use negative pressure. The positive movement of tank vapors into the hood inlet should be observable.
9. Keep acid process tanks closed at all times except when in use.
10. Ensure that the process tank has a freeboard height (distance from the top of the liquid to the top of the tank) of at least five (5) inches while the items are submerged.
11. Clean parts to be processed before treatment.
12. Ensure that metal parts are added or removed from the tank in a manner to prevent splashing.
13. Ensure that parts being removed from the tank have stopped dripping before complete removal from the tank.
14. Ensure that the speed of the hoist used to lower and remove parts from treatment tanks is slow enough to minimize the push or pull of solvent vapors out of the tank (speed requirement is 11.2 feet per minute (fpm) or less).
15. Notify Hazardous Waste Disposers (HWD) when chemicals need to be changed (e.g., decline of cleaning efficiency as verified by a pH test).
16. Only HWD and operator are authorized to pump chemicals into approved drums and to remove the buildup of solids for disposal.
17. Manage hazardous waste according to the hazardous waste handling ESOPs.
18. Refill tank to the designated fill level that is marked on tank. Tank refill must be monitored by tank operator at all times.
19. Ensure that an operator's log is maintained on-site and available for a three (3) year period which lists the chemical contained in each tank and the date and amount of chemical added. The operator's log should also include a daily self-inspection checklist.
20. Document daily inspections of tanks and weekly inspections of storage areas in an inspection logbook. Maintain records for 3 years.
21. The following records must be maintained:
 - a. SDS for applicable hazardous materials.

- b. Training records and certifications for personnel.
 - c. Inspection records.
 - d. Maintenance records.
 - e. Operator's logbook.
 - f. Spill reports.
22. In the event of an Emergency refer to MCLB Barstow's Integrated Contingency Management Plan (ICMP).
23. The unit Environmental Compliance Coordinator shall coordinate with their supervisor/leadership to ensure personnel are designated to conduct inspections. All deficiencies noted during the inspections will be corrected immediately. All actions taken to correct each deficiency shall be recorded on the inspection sheet.

REFERENCES.

- a. 29 Code of Federal Regulations (CFR) 1910 (Occupation Safety and Health Standards)
- b. 40 CFR 262 (Standards Applicable to Generators of Hazardous Waste)
- c. 22 California Code of Regulations (CCR) 66265 (Interim Status Standards for Owners and Operators of Hazardous Waste Transfer, Treatment, Storage, and Disposal Facilities)
- d. MCO P4790.2C (Marine Corps Integrated Maintenance Management System Field Procedures Manual), as applicable
- e. MCO P5090.2 (Marine Corps Environmental Compliance and Protection Manual)
- f. MCO P5100.8F (Marine Corps Occupational Safety and Health Program Manual)
- g. Mojave Desert Air Quality Management District Permit to Operate (MDAQMD PTO)
- h. MCLB Barstow ICMP

TRAINING.

Unit personnel should be trained on all the provisions of this ESOP. All training must be requested through unit ECC or Environmental Compliance Branch.

All personnel must be trained in this ESOP, to include the following, as applicable:

- a. Hazard Communication (HazCom) training.
- b. First Responder Awareness course
- c. First Responder Operations (FRO) course (if required).
- d. FRO Refresher course.
- e. Hazardous Waste Handlers course.
- f. Confined Space Entry training.
- g. Hazardous waste handling ESOPs.
- h. On-the-job training.