A full-page photograph of a Marine in a desert environment. The Marine is wearing a tan helmet and uniform, and is using a tool to work on the tire of a large military vehicle. In the background, other military vehicles and personnel are visible, including one with a large white cylindrical object mounted on top. The ground is sandy and dusty.

# **COMPLIANCE CHECK: A PRACTICAL GUIDE TO ENVIRONMENTAL ISSUES**

**DISTRIBUTION STATEMENT A:**

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**UNITED STATES MARINE CORPS**



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# COMPLIANCE CHECK: A PRACTICAL GUIDE TO ENVIRONMENTAL ISSUES



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## INTRODUCTION

**THE MARINE CORPS** systematically addresses environmental requirements by incorporating these requirements into day-to-day procedures. This simplified guide, *Compliance Check: A Practical Guide to Environmental Issues*, is intended to assist Marines and civilians in understanding and addressing common environmental issues that are associated with workplace practices. This guide may serve as an environmental process guide for use by personnel in the shop or as a training aide to explain specific compliance requirements. It is intended to reinforce key concepts taught in formal environmental courses such as the hazardous materials/hazardous waste (HM/HW) training courses. The guide focuses on those workplace practices that are most commonly found at the installation shop floor level. These workplace practices are presented in this guide as environmental guidesheets. Each guidesheet provides:

- A brief description of the workplace practice;
- A checklist of requirements for:
  - ❖ Inspecting a workplace practice;
  - ❖ Operating a workplace practice so there are little or no environmental problems;
  - ❖ Contacting personnel in case of an emergency;
  - ❖ Coordinating with personnel for reporting, scheduling maintenance, and training; and
- A list of actions that the operator should take and/or avoid.

Where appropriate, a guidesheet may include a poster that can be displayed in the shop to reinforce the actions operators should take (or avoid) to stay in compliance with environmental requirements.

While this guide includes Federal requirements, state and local requirements may be more stringent. The installation environmental office maintains installation-specific management plans and spill response plans. It is recommended that you check with the environmental office to learn more about these requirements or installation-specific procedures. You may also consult *MCO P5090.2A, Environmental Compliance and Protection Manual*, which provides guidance and instruction on meeting environmental regulations or the environmental standard operating procedure (SOP) for your shop/work center which provides compliance guidance and best management practices. Also note that overseas installations have different rules, and personnel may need additional training.

## HAZARDOUS MATERIAL OVERVIEW

**Hazardous Materials (HMs)**, sometimes referred to as HAZMAT, is any material that is a health or physical hazard or that could present a risk to human health or the environment. The key is that the HM is a useable item, which can be used for its intended purpose. It is not contaminated, shelf-life expired, or otherwise unusable. Most HMs cannot be thrown in the trash when they do become unusable and must be disposed of as hazardous waste (HW) or by using other special procedures.

Every HM must be accompanied by a document called a Material Safety Data Sheet (MSDS.) The MSDS contains information on the hazards of the HM and other important safety information, such as what personal protective equipment (PPE) to wear and how to administer first aid. The vendor or supply office where you get the HM usually provides the MSDS.

One Marine Corps goal is to reduce the amount of HM used and therefore the amount of HW disposed by controlling the procurement, supply, and use of HM. Your installation should have a Hazardous Material Consolidation Program (HCP) that identifies how these materials are supplied and controlled from purchase through disposal. Only authorized users may order HMs, and where possible, HM not needed by one unit can be returned and reissued to another unit or department. This saves the cost of purchasing new materials and also avoids the disposal of expired HM as HW.

**Note:** *Read and understand the following environmental guidesheets:*

*Hazardous Waste Management Overview (page 4); and  
Solid Waste Management Overview (page 42).*



Well-maintained hazardous material dispensing area with secondary containment at MCAS Iwakuni.

## HAZARDOUS MATERIAL OVERVIEW COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Learn the differences between hazardous materials (HMs) and waste types.
- ✓ Review the Material Safety Data Sheet (MSDS) for every HM in your workplace.
- ✓ Only order the amount of HM that you need from your supply office in accordance with your shop's Authorized Use List (AUL).
- ✓ Use older stocks of HM before newer ones. Use up your supplies or turn in excess stocks for reuse before the shelf life expires.
- ✓ Store materials in approved containers only.
- ✓ Store materials in HAZMAT buildings or lockers or on a covered containment pallet to prevent spills from reaching the ground or water and to prevent storm water from contacting the containers.
- ✓ Close and secure containers, even when empty, to prevent spills and contamination of product.
- ✓ Segregate incompatible materials to reduce hazards.

### CONTACT & COORDINATE

- ✓ Contact the installation safety office to schedule Hazard Communication (HAZCOM) training and to obtain site-specific safety procedures if you directly handle HMs.
- ✓ Contact your supervisor or unit environmental coordinator to obtain the MSDS and review standard operating procedures (SOPs) if you are handling a new HM.

### AVOID

- ✗ Do not dump any HM into floor drains, sinks, oil/water separators, storm sewers, or onto the ground.
- ✗ Do not unnecessarily stockpile HM that may become a hazardous waste if not used up.
- ✗ Do not store HMs near sources of high heat or open flame.
- ✗ Do not mix useable HM with other HM or waste products (e.g., used oil/antifreeze).

## HAZARDOUS WASTE MANAGEMENT OVERVIEW

**Hazardous Wastes (HWs)** require specific handling procedures because of the risks they present to human health and the environment. The key is that HWs can no longer be used for their intended purpose. However, they cannot be disposed of in dumpsters and general trash bins. They require special containment, labeling, and container inspection procedures. You should avoid mixing HW with other materials because you could be creating a hazardous situation or a more difficult waste to dispose of. Your supervisor or unit environmental coordinator will provide you with specific training and standard operating procedures (SOPs) on how to handle HW within your shop. A waste is a HW if:

1. It is **specifically listed as a HW by the U.S. Environmental Protection Agency (U.S. EPA)** or a state environmental agency. If a waste is listed, then it is definitely a HW, and does not require further testing to make this determination; or
2. It **shows certain characteristics that qualify it as a HW. These characteristics are ignitability (flammability), toxicity, corrosiveness, or reactivity.** Many wastes must be tested to see if they show these characteristics prior to disposal. Examples include waste paints, and petroleum/oil/lubricant (POL) contaminated rags and absorbents. This testing is usually conducted by the installation environmental office or by an outside contractor.



Hazardous waste stored at MCRD Parris Island.

**Acutely Hazardous Wastes** are wastes that U.S. EPA has determined to be so dangerous in small amounts that they are regulated more strictly than larger amounts of other HWs. All acutely HWs have an EPA number beginning with the letter “P.”

**Universal Wastes (UWs)** are a special category of HW. They are usually HWs that are generated in a wide variety of shops or activities, do not pose severe risks to the environment or human health, and can be recycled. There are still special collection, labeling, and handling procedures that are required, but they are usually not as restrictive as procedures for other HWs. For example, UWs can normally be accumulated on-site for up to one year (versus 90 days for HW), and up to 11,000 pounds of UW can be stored on-site at any time without triggering more restrictive regulations. Note that UWs must be recycled (not landfilled or incinerated) to qualify for these benefits, and the generating facility normally may not “treat” (e.g., crush, dismantle) the waste in any way prior to shipping off-site. Examples of UWs include waste batteries, fluorescent light bulbs, waste pesticides, and mercury-containing equipment, such as thermostats and switches.



Pesticides stored at MCRD San Diego.

**Used Oils** are another special category of waste. They consist of oils (e.g., lubricating, hydraulic) that have been used, and cannot be used again for their intended purpose at the shop level. If used oil is collected for reconditioning or recycling off-site, then you can minimize many of the restrictive HW handling requirements. You would only need to apply a few basic requirements, such as spill prevention and container marking.

The installation environmental office maintains many specific management plans and can provide specific information on local environmental management standard operating procedures (SOPs), installation orders, and state and local procedures.

**Note:** Read and understand the following environmental guidesheets for additional information about specific waste management procedures:

*Hazardous Material Overview (page 2);*

*Hazardous Waste Satellite Accumulation Area Management (page 8);*

*Battery Management (General) (page 10); and*

*Solid Waste Management Overview (page 42).*



Properly stored used oil at MCB Hawaii.

## HAZARDOUS WASTE MANAGEMENT OVERVIEW COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Learn the differences between hazardous materials (HMs) and hazardous wastes (HWs).
- ✓ Follow all storage and handling requirements for HWs, universal wastes (UWs), and used oil.
- ✓ Identify and properly mark or label all wastes generated.
- ✓ Follow all documentation and recordkeeping requirements as outlined in your shop standard operating procedures (SOPs).
- ✓ Review emergency procedures so you know what to do in case of a spill or fire.

### CONTACT & COORDINATE

- ✓ Contact the installation environmental office to schedule training (e.g., HW generator training) if you directly handle HW, UWs, and/or used oil.
- ✓ Review emergency procedures so you know what to do in case of spill or fire.
- ✓ Contact your supervisor or unit environmental coordinator for SOPs for management and disposal of specific waste types, or if you are unsure how to dispose of a new waste not covered by an existing SOP.

### AVOID

- ✗ Do not dump any oil or HW into floor drains, sinks, oil/water separators, storm sewers, or onto the ground.
- ✗ Do not unnecessarily stockpile HM that may become HW if not used up.
- ✗ Do not mix different waste types (e.g., used oil + used antifreeze) or waste products with usable HM.

## HAZARDOUS WASTE SATELLITE ACCUMULATION AREA MANAGEMENT

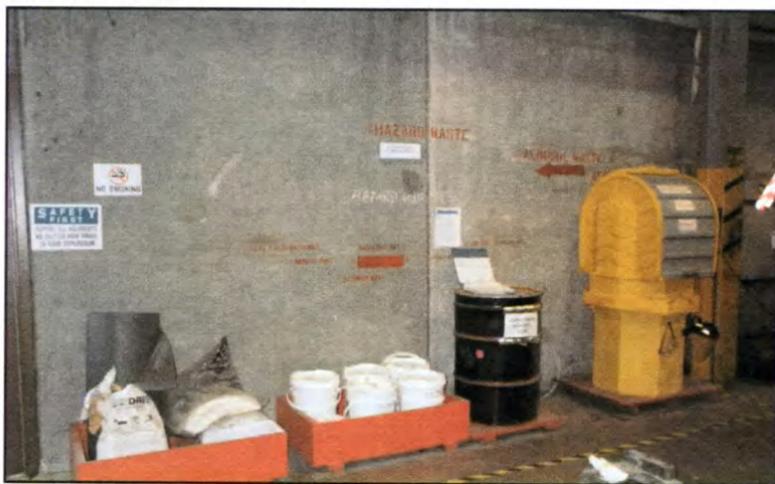
### SATELLITE ACCUMULATION AREA STORAGE LIMITS

- 55 gallons total of hazardous waste; or
- 1 quart total of acutely hazardous waste

Hazardous wastes (HWs) are generated in a wide variety of military shops and in maintenance and operational activities. HW regulations allow for an intermediate storage area for HW in the area where the HWs are generated that is under the control of the person generating the waste. Satellite Accumulation Areas (SAAs) allow shops to store limited amounts of HW before they must be moved to a 90-day site or shipped off-site for disposal at a permitted HW facility. Installations have written policies outlining when, where, and under what conditions a SAA may be authorized. Only authorized and trained personnel should have access to HW containers.

**Note:** Read and understand the environmental guidesheet to review categories of wastes (e.g., HWs, UWs), definitions, and general management procedures that may apply:

*Hazardous Waste Management Overview (page 4).*



Hazardous waste satellite accumulation area at Blount Island Command.

## HAZARDOUS WASTE SATELLITE ACCUMULATION AREA MANAGEMENT COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Label the containers clearly with the words, "Hazardous Waste" or other descriptive words that identify the contents such as "waste contaminated fuel" or "waste cleaning solvent."
- ✓ Store hazardous waste (HW) in containers that are compatible with the HW being stored.
- ✓ Close containers unless adding or removing waste.
- ✓ Label containers with the date as soon as more than 55 gallons of HW (or one quart of acutely HW) is accumulated.
- ✓ Once the 55-gallon limit of HW or one quart limit of acutely HW is reached, move the HW to a 90-day site or ship off-site to a permitted HW facility within three (3) days.
- ✓ Inspect the satellite accumulation area (SAA) regularly and in accordance with your installation's procedures and document your findings (e.g., leaks, spills, container damage). Fix deficiencies quickly.
- ✓ Clean up drips or leaks of HW promptly and return them to the appropriate container in the SAA. All HW must be inside the container. None is permitted on the top or sides.
- ✓ If a container is leaking, rusting, or is severely dented, transfer all the contents to a new, serviceable container.

### CONTACT & COORDINATE

- ✓ Contact the installation environmental and/or safety office to schedule HW training and site-specific safety procedures if you directly handle HW at the SAA.
- ✓ Contact your supervisor or unit environmental coordinator for HW transportation, required supplies, or guidance on new or changing HW types.

### AVOID

- ✗ Do not accept HW that is generated from other locations on the installation or from other installations.
- ✗ Do not mix different waste types together.

## BATTERY MANAGEMENT (GENERAL)

Batteries make up a large portion of the potentially hazardous waste stream generated at an installation. Batteries that may require disposal as a hazardous waste include alkaline batteries, nickel-cadmium (NiCad) batteries, lithium batteries, and lithium-sulfur batteries (frequently used in communications equipment), as well as lead-acid batteries (generally used in vehicles and related equipment). When batteries are disposed of in a landfill or incinerator, the mercury, lead, cadmium, silver, or other chemicals can contaminate air, surface water, and groundwater. Most batteries must be recycled or managed as hazardous waste, so it is important to segregate batteries from other wastes. Special care should be taken when handling batteries because they contain highly corrosive acids. Table 1 outlines the various types of batteries and their corresponding characteristics.

Many types of batteries are rechargeable, and therefore may be able to be recharged and reused over an extended period of time. It is important to know whether the batteries being used can be recharged so that useable batteries are not disposed of before the end of their useful life.

Certain batteries can be recycled and, depending on the locality, may be managed as regular solid waste (SW), universal waste (UW), hazardous waste (HW), or by other procedures. Check with the installation environmental office for guidance on how waste batteries need to be managed at your installation.

Managing recyclable batteries as UW allows the batteries to be accumulated for up to one year, provided certain storage, segregation, and labeling requirements are met. This is less restrictive than HW management requirements.

**Note:** *Read and understand the following environmental guidesheets:*

*Hazardous Material Management Overview (page 2);*

*Hazardous Waste Management Overview (page 4); and*

*Hazardous Waste Satellite Accumulation Area Management (page 8).*

TABLE I. TYPE OF BATTERIES AND MANAGEMENT PROCEDURES

TYPE OF BATTERY	HAZARDOUS FOR:	RECYCLABLE OR NON-RECYCLABLE?	RECHARGEABLE OR NON-RECHARGEABLE?
<b>ALKALINE</b>		LIMITED RECYCLABILITY	RECHARGEABLE AND NON-RECHARGEABLE
<b>NICKEL-CADMIUM</b>	HAZARDOUS FOR CADMIUM (Cd), WASTE CODE: D006	RECYCLABLE	RECHARGEABLE
<b>SEALED LEAD-ACID</b>	HAZARDOUS FOR LEAD (Pb), WASTE CODE: D008	RECYCLABLE	RECHARGEABLE
<b>LITHIUM, ION</b>		RECYCLABLE	RECHARGEABLE
<b>LITHIUM, SMALL (9 VOLTS OR LESS)</b>		RECYCLABLE	NON-RECHARGEABLE
<b>LITHIUM, LARGE (MORE THAN 9 VOLTS)</b>	POTENTIALLY HAZARDOUS FOR REACTIVITY (IF HAZARDOUS, WASTE CODE: D003)	RECYCLABLE	NON-RECHARGEABLE
<b>LITHIUM-SULFUR DIOXIDE</b>	CONSIDERED HAZARDOUS WASTE UNTIL THE COMPLETE DISCHARGE DEVICE (CDD) ON THE BATTERY, IF AVAILABLE, HAS BEEN ACTIVATED.	RECYCLABLE	NON-RECHARGEABLE

\* CONTACT THE INSTALLATION ENVIRONMENTAL OFFICE AND REFER TO LOCAL SOPS TO VERIFY BATTERY MANAGEMENT AND TURN-IN PROCEDURES.

## BATTERY MANAGEMENT (GENERAL) COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Store compatible batteries together (e.g., lithium batteries should be stored with other lithium batteries).
- ✓ Store lead-acid batteries away from open flame in a secured, covered location, which is designed to contain leaks and protect from temperature extremes.
- ✓ Store batteries off the ground to prevent them from coming in contact with water.
- ✓ Place rechargeable batteries individually in plastic bags before storing them with other rechargeables.
- ✓ If lithium batteries are to be discharged upon removal from service, ensure that it is only done by a qualified person.
- ✓ Inspect battery storage areas frequently.
- ✓ Include the date taken out of service on the container or label.

### CONTACT & COORDINATE

- ✓ Call the fire department and notify the environmental office in the event of an emergency or unusual condition (e.g., fire, leak, physical damage).
- ✓ Contact your supervisor or unit environmental coordinator for guidance and training on battery management and turn-in procedures at your installation.
- ✓ Record the results from inspections. Include manifest information, recycling records, and transportation and shipping information in a logbook as directed by the installation environmental office.

## BATTERY MANAGEMENT (GENERAL) COMPLIANCE CHECK

### AVOID

- ✘ Do not store batteries near heat, open flame, or combustible or flammable materials.
- ✘ Do not stack batteries.
- ✘ Do not smoke, drink, or eat in battery storage areas.
- ✘ Do not attempt to recharge non-rechargeable batteries because they may explode or cause fires when recharging attempts are made.
- ✘ Do not extinguish lithium battery fires with water or agents containing water because they are water reactive.
- ✘ Do not allow lithium batteries to come into contact with water or agents containing water because they are water reactive.



Batteries being prepared for recycling at MCAS Yuma.

## WATER QUALITY MANAGEMENT OVERVIEW

Clean and dependable water resources are essential for the operation of our Marine Corps installations. Freshwater in reservoirs, rivers, and/or the groundwater beneath our installations supply the potable water we drink and use in activities aboard the installation. Contamination of these water supplies can directly impact the health and safety of our Marines and their families and can adversely affect our mission.

Many of our Marine Corps installations are located near the coastline with rivers and creeks that flow through the installation and discharge to surrounding waters shared by the community and many wildlife species. Water quality can be impacted by nearly all human activities. These impacts range from heavy industrial operations to even simple actions such as washing your automobile or refueling a generator. Our Marine Corps installations have developed storm water pollution prevention plans that recommend **best management practices (BMPs)** to assist in preventing contamination from reaching these waters. BMPs are practical, economical, and effective management or control practices that will reduce or prevent water pollution or adverse impacts to natural resources. To better understand your role and requirements in protecting water quality, please review the following basic terms and concepts:

**Potable water:** Water of drinking water quality that is piped into buildings and homes aboard the installation. Potable water is used for drinking water, irrigation, and industrial uses. Water conservation is very important in desert climates.

**Storm water:** Water from rainfall or snowmelt that flows over paved areas and other land surfaces. Storm water runoff flows without treatment into lakes, rivers, and coastal water, and seeps through the soil to the groundwater. Small drips, leaks, and spills that are not cleaned up immediately can contribute to contaminating storm water runoff and may cause pollution in groundwater and in downstream waters.

**Storm drain and conveyance systems:** The inlets to pipes, gutters, ditches, roads with drainage systems, retention basins, and manmade channels that drain storm water directly to rivers, creeks, lakes, and/or coastal waters to prevent flooding.

**Wastewater:** Water discharged to a sanitary sewer or industrial waste collection system after use in homes, buildings, and industrial operations. Wastewater comes from sinks, toilets, showers, washracks, equipment washing, cooling, and other industrial operations, and requires some form of treatment before being discharged to the environment.

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**Sanitary Sewer System:** A conveyance system that collects wastewater from homes and buildings, primarily from sinks, toilets, showers, and washracks, and flows to a wastewater (sewage) treatment plant (WWTP).

**Industrial Waste Collection System:** A conveyance system that collects wastes from industrial operations and provides specialized pre-treatment to remove certain contaminants or amounts of contaminants, such as heavy metals or toxic chemicals, before the wastewater can be discharged to the sanitary sewer system.

**Wastewater Pretreatment Device:** A man-made facility used to partially treat wastewater before it enters a WWTP. Pretreatment devices usually treat a very specific wastewater source and are designed to remove only a narrow range of pollutants. Many pretreatment devices throughout the installation may discharge to a single WWTP. Oil/water separators (OWSs) are the most common examples of pretreatment devices. Other pretreatment devices include grease traps (near mess halls), silver recovery units (near photo and X-ray units), and grit chambers (near washracks.)

**Note:** Read and understand the environmental guidesheet to learn more about specific actions required to address water quality concerns:

*Oil/Water Separators (page 18).*



Illustration of water run-off on a military installation.

## WATER QUALITY MANAGEMENT OVERVIEW COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Follow all best management practices (BMPs) and standard operating procedures (SOPs) established to control rinse water discharge and storm water runoff.
- ✓ Store containers of petroleum/oil/lubricants (POLs) and other hazardous materials (HMs) in indoor storage, on containment pallets, or undercover.
- ✓ Inspect POL/HM storage, refueling, and trash areas frequently.
- ✓ Keep appropriate spill clean-up kits wherever POLs and HMs are stored or used.
- ✓ Clean up all spills and leaks promptly and safely.
- ✓ Provide drip pans or similar containment for parked vehicles and equipment (e.g., portable generators) that may leak POL fluids.
- ✓ Conduct potentially "messy" vehicle and equipment maintenance (e.g., oil changes, fueling, washing) only in designated areas.
- ✓ If conducting vehicle or equipment maintenance in the field, use appropriate controls (e.g., drip pans, portable berms).
- ✓ Reduce the amounts of detergents and harsh chemicals going into the wastewater system by limiting the amount you use.
- ✓ Look for leaks, drips, or other ways that storm water runoff can contact POL/HM.
- ✓ Follow all SOPs when discharging into a pretreatment device (e.g., oil/water separators (OWSs), grit chamber, silver recovery unit).



Wastewater treatment plant.

## WATER QUALITY MANAGEMENT OVERVIEW COMPLIANCE CHECK

### CONTACT & COORDINATE

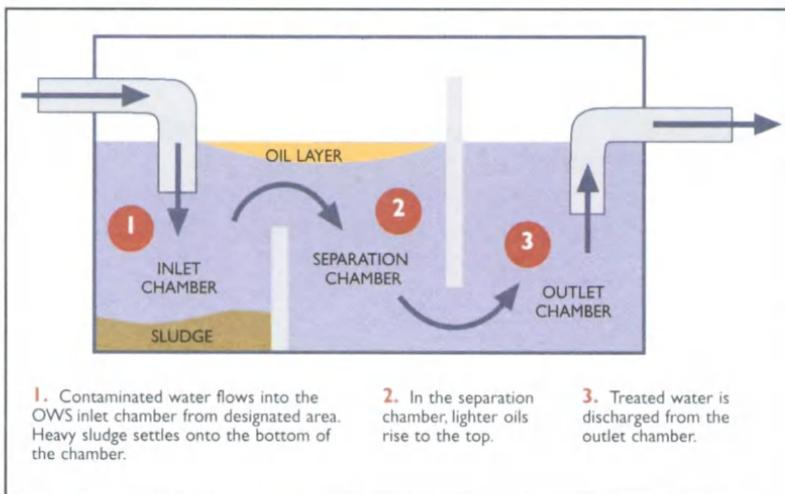
- ✓ Contact the installation environmental office to find out what BMPs apply to your location and its operations. Be aware of specific prohibitions or operating restrictions.
- ✓ Contact your supervisor or unit environmental coordinator if you:
  - ❖ Notice any spill or leak (or potential for one);
  - ❖ Are unsure of how to properly dispose of rinse water;
  - ❖ Are unsure of what cleaners or chemicals may be used for washing and cleaning; or
  - ❖ Require maintenance for silver recovery units and other pretreatment devices.
- ✓ Contact the installation environmental office to review permits, schedule training, or arrange for maintenance for pretreatment devices.

### AVOID

- ✗ Do not dump any POLs or chemical products directly into any sink, or floor or storm water drain!
- ✗ Never dump or drain any POLs or chemical products directly onto the ground!
- ✗ Do not dump any wastewater or wash water directly on the ground, drainage ditches, or surfaces unless specifically authorized by the installation environmental office.
- ✗ Do not store POL/HM containers or conduct vehicle or equipment maintenance on top of floor drains, storm drains or washracks.

## OIL / WATER SEPARATORS

Oil/water separators (OWSs) are used to remove oil and grit from wastewater during processes such as vehicle/aircraft maintenance and washing, petroleum/oil/lubricant (POL) storage and transfer, or in equipment storage areas where there is the potential for small quantities of oil to leak onto concrete or paved areas of the ground. OWSs cannot handle large quantities of POLs or excessive dirt and mud. It is never appropriate to dump hazardous materials (HMs) or hazardous waste (HW) into an OWS.



Schematic of oil/water separator.

### OIL / WATER SEPARATORS COMPLIANCE CHECK

#### REQUIRED ACTIONS

- ✓ Inspect piping, chambers, and other parts for leaks.
- ✓ Plug or block floor drains in maintenance shops that may carry contaminants to the oil/water separator (OWS).
- ✓ Use only approved soaps and detergents at the washrack. Most soaps and detergents may change the properties of the oil and allow it to pass through the OWS into the sewer system or surface waters.

## OIL / WATER SEPARATORS COMPLIANCE CHECK

### REQUIRED ACTIONS (cont'd)

- ✓ Remove excessive dirt, mud, and vegetation away from the separator.
- ✓ Clean up spills promptly and safely.
- ✓ Stop washrack operations if there is evidence the OWS is not working properly (e.g., blockage, backup or no oil accumulating in the oil reservoir).

### CONTACT & COORDINATE

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., fire, leak, physical damage).
- ✓ Contact your supervisor or unit environmental coordinator for necessary training on the OWS prior to operation.
- ✓ Call the installation Facilities Management Division (FMD) or Environmental Shop to schedule oil and sediment removal and OWS maintenance.
- ✓ Contact the installation environmental office for a list of soaps/detergents that can be used at washracks.
- ✓ Record the results from inspections. Include pump out, maintenance records, or other information in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not directly dump petroleum/oil/lubricant (POLs), solvents, absorbents, trash, or any hazardous materials or chemicals into the OWS or down a floor drain.
- ✗ Do not perform vehicle or equipment maintenance such as oil changes directly over an OWS.
- ✗ Do not wash spilled material down a floor drain.
- ✗ Never use any soap or harsh chemical cleaners or solvents at a washrack with an OWS unless specifically approved by the installation environmental office.

## PETROLEUM / OIL / LUBRICANT STORAGE OVERVIEW

Petroleum/oil/lubricant (POL) storage includes the storage of fuels, oil, and byproducts from changing engine oil and greasing equipment. It may also include the storage of off-specification fuels, contaminated fuels, petroleum soaked rags, and contaminated dry sweep/soil. POL is stored in containers ranging in size from large aboveground storage tanks and underground storage tanks to small containers (< 55 gallons) such as one-liter containers of lubricating oils in hazardous materials (HM) lockers.

Proper management of POL products is critical in all work settings, as improper storage, handling, or disposal can result in:

- Contamination of soil, groundwater, surface waters, and even drinking water supplies;
- Malfunction of wastewater (sewage) treatment plants;
- Excess air emissions that contribute to smog and other air quality problems;
- Risks of fire and explosions;
- Short-term and long-term health effects from personnel exposure; and
- Increased disposal costs.

Most military installations are required to maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan to help prevent POL spills. The SPCC Plan normally addresses all bulk (55 gallons or greater) POL storage and handling operations aboard an installation, and typically describes both engineering (e.g., containment berms, tank construction) and management (e.g., training, inspections) controls to aid in spill prevention. The SPCC Plan may also include a Spill Contingency Plan (SCP) component that addresses how the installation will respond to actual POL spills.

All personnel who handle POL products should be aware of, and trained in, their responsibilities under the installation's SPCC/SCP Plan, including:

- Proper procedures for transporting, transferring, and using POL products in a manner that minimizes spills;
  - Inspection and maintenance of required spill prevention equipment, including containment pallets, berms and dikes, and drain control valves;
-

- Maintenance and use of spill cleanup supplies (e.g., dry-sweep, oil socks, absorbent pads) used to control small spills, leaks, and drips; and
- Emergency actions (e.g., notifications, stopping POL transfer, controlling ignition sources, evacuating personnel) required in the event of a larger or more dangerous spill scenario.

**Note:** Read and understand the following environmental guidesheets to learn more about specific management procedures for storing and disposing of POL:

*Aboveground Storage Tanks (page 24);*

*Underground Storage Tanks (page 26); and*

*Used Oil Management (page 28).*



Used oil storage area. (Note: The term "waste oil" is specific to California).

## **PETROLEUM / OIL / LUBRICANT STORAGE OVERVIEW COMPLIANCE CHECK (FOR < 55 GAL STORAGE)**

### **REQUIRED ACTIONS**

- ✓ Store small petroleum/oil/lubricant (POL) containers in a hazardous material (HM) building, approved storage locker, (e.g., flammable materials locker), covered containment pallet, or other secure area, away from rain and sun.
- ✓ Use only Department of Transportation (DOT) approved metal drums – never plastic, fiberglass, or fiber drums.
- ✓ Inspect POL containers weekly for leaks, corrosion, dents, and for incomplete, unreadable, or out-of-date labels.
- ✓ Keep container lids closed except when adding or removing POL.
- ✓ Provide adequate aisle space between the rows of POL storage containers to allow for proper inspection and housekeeping.
- ✓ Locate spill kits for easy access.
- ✓ Clean up drips/spills and report spills immediately.
- ✓ Keep POL storage area neat and free of debris.

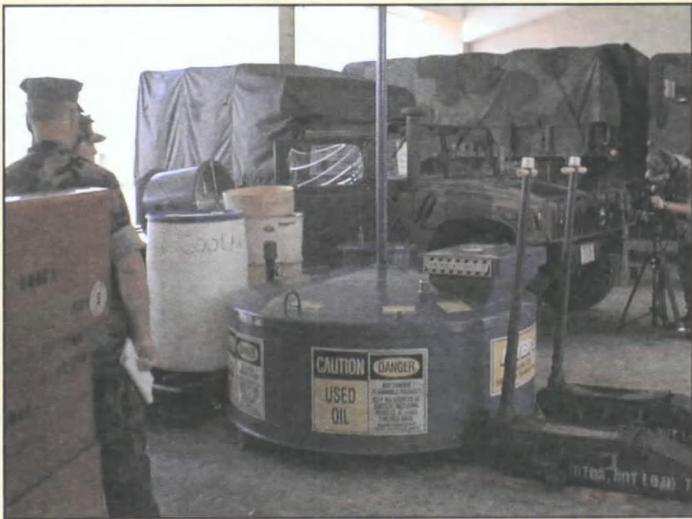
### **CONTACT & COORDINATE**

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., fire, leak, physical damage, or alarm going off).
- ✓ Review the spill requirements pertaining to POL storage in the installation's Spill Prevention, Control and Countermeasures (SPCC) Plan, and your site-specific spill plan.
- ✓ Contact your supervisor or unit environmental coordinator for necessary training on POL management, spill prevention and response training, and emergency procedures.
- ✓ Record the results from inspections. Include manifest information and transportation and shipping information in a logbook as directed by the installation environmental office.

**PETROLEUM / OIL / LUBRICANT STORAGE OVERVIEW  
COMPLIANCE CHECK  
(FOR < 55 GAL STORAGE)**

**AVOID**

- X** Do not store POL containers near moving forklifts or vehicles.
- X** Do not mix different types of used POL products.
- X** Do not overfill POL storage containers.
- X** Do not place POL storage containers near high heat or open flame.
- X** Do not smoke near POL storage containers.



Used oil management at MCB Camp Butler.

## ABOVEGROUND STORAGE TANKS

Aboveground storage tanks (ASTs) are commonly used to store gasoline, diesel fuel, jet fuel (e.g., JP5, JP8), oils, lubricants, and other liquids. ASTs refer to both permanent, fixed tanks, as well as portable containers 55 gallons or greater in size. Storage of liquids in ASTs requires containment controls that can hold the contents of the AST plus a safety factor (usually 110% of the tank capacity). These secondary containment areas may collect storm water from rain events and must be inspected for signs of contamination before draining.

### ABOVEGROUND STORAGE TANKS

#### COMPLIANCE CHECK

##### REQUIRED ACTIONS

- ✓ Inspect the tank, tank bottom (if visible), tank piping, pumps, valves, supports, containment area, and foundations for signs of leak, corrosion (e.g., rust, pitted areas), or damage.
- ✓ Inspect the petroleum/oil/lubricant (POL) fill/transfer area for evidence of a spill.
- ✓ Review the unit Spill Contingency Plan for actions to take in the event of an emergency.
- ✓ Locate spill kits for easy access. Clean up small spills, leaks, or drips using proper spill kit supplies.
- ✓ Take emergency actions (e.g., stop POL flow, shut off ignition sources, notify the fire department, evacuate the site) if you discover a spill that is too large or dangerous to control with your basic spill kits.
- ✓ Inspect facility lighting and fencing for proper operation and security.
- ✓ Close and lock drain plugs or valves when not in use.
- ✓ Remove dirt, leaves, trash, and weeds from the containment area.
- ✓ Inspect the aboveground storage tank (AST) area for any rainwater or melted snow. If a sheen on the water is visible, contact the installation environmental office. If sheen is not present, pump or drain rainwater from the containment area as soon as possible.
- ✓ Remove any stored items such as buckets and drums from the containment area.
- ✓ Mark tanks with the substance stored and the appropriate National Fire Protection Association (NFPA) label.

## ABOVEGROUND STORAGE TANKS COMPLIANCE CHECK

### CONTACT & COORDINATE

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., alarm going off, fire, leak, physical damage).
- ✓ Contact your supervisor or unit environmental coordinator for necessary training on ASTs prior to operation and on maintaining and calibrating the leak detection system.
- ✓ Contact the installation Facilities Management Division (FMD) or Environmental Shop to schedule testing of leak detection equipment.
- ✓ Record the results from inspections. Include maintenance, usage, repair, and delivery information in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not remove liquid from the containment area until it has been visually checked for signs of contamination (i.e., sheen).
- ✗ Do not smoke, use open flames, or perform cutting and welding within 25 feet of any AST containing a flammable or combustible liquid.
- ✗ Do not operate equipment that could create a spark or static electricity within 25 feet of any AST containing a flammable or combustible liquid.
- ✗ Do not enter an AST.
- ✗ Do not bypass or disable alarms or automatic shutoff devices.



ASTs at MAGTFTC Twentynine Palms.

## UNDERGROUND STORAGE TANKS

Underground storage tanks (USTs) are commonly used to store gasoline, diesel fuel, jet fuels (e.g., JP5, JP8), petroleum/oils/lubricants (POLs), and other liquids. Storage of liquids in USTs requires spill and leak controls, as well as corrosion protection. This information applies to USTs that are used for the storage of POL products. Spill detection and control for USTs is challenging, as underground leaks are difficult to detect. All personnel managing USTs should be familiar with the UST's automated leak detection system and/or manual product level gauging. Sudden or unexplained drops in liquid levels are a key indicator of UST leaks. Other potential signs of UST leakage include strong fuel odors (even when not transferring POL) and appearance of free POL or stains in nearby ditches, swales, or other low ground.

### UNDERGROUND STORAGE TANKS COMPLIANCE CHECK

#### REQUIRED ACTIONS

- ✓ Inspect and test the underground storage tank (UST) leak detection system daily.
- ✓ Inspect the overfill compartments, spill containers, and secondary containment areas for signs of a leak, damage, or debris.
- ✓ Review the unit Spill Contingency Plan for actions to take in the event of an emergency.
- ✓ Inspect the area around the UST for any rainwater or melted snow. If sheen is found, contact the installation environmental office.
- ✓ Inspect overfill containers after fuel delivery. Contact the installation environmental office if the tank has been overfilled.
- ✓ Lock fill and discharge caps, vents, and valves when not in use.
- ✓ Remove dispenser skirts and check the dispenser for spills weekly.

#### CONTACT & COORDINATE

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., alarm going off, fire, leak, physical damage).
- ✓ Contact your supervisor or unit environmental coordinator for necessary training on USTs and the leak detection system prior to operation.

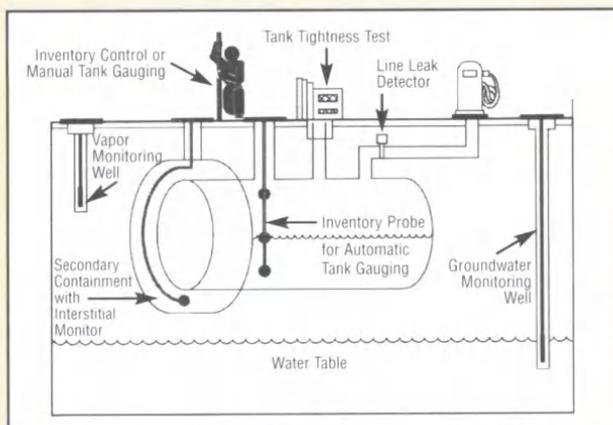
## UNDERGROUND STORAGE TANKS COMPLIANCE CHECK

### REQUIRED ACTIONS (cont'd)

- ✓ Contact the installation Facilities Management Division (FMD) or Environmental office to schedule maintenance and testing of leak detection and/or corrosion protection equipment.
- ✓ Record the results from inspections. Include maintenance, usage, repair, and delivery information in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not remove liquid from the overflow compartment or containment area until it has been evaluated by the unit environmental coordinator or the installation environmental office.
- ✗ Do not smoke, use open flames, or perform cutting and welding within 25 feet of any UST containing a flammable or combustible liquid.
- ✗ Do not operate equipment that could create a spark or static electricity within 25 feet of any UST containing a flammable or combustible liquid.
- ✗ Do not enter an UST.
- ✗ Do not bypass or disable alarms or automatic shutoff devices.
- ✗ Do not overfill tanks during fuel delivery.



Schematic of an underground storage tank.

## USED OIL MANAGEMENT

Used oil refers to lubricating, hydraulic, cutting, and cooling oils (petroleum-based or synthetic) that have been used and, as a result of this use, have a limited useful life. They are used in a wide variety of military shops, as well as maintenance and operational activities. As a result, large quantities of used oil are generated that are no longer suitable for their intended purpose. Federal and state environmental regulations prohibit the intentional dumping of used oil into sewers, waterways, the ground, or even conventional trash dumpsters and containers. Because used oil may display hazardous properties (e.g., contain toxic metals), it may not be disposed of like other solid wastes. Used oil can usually be recycled or used for other beneficial purposes (e.g., burned as a fuel), and it is normally not managed as a hazardous waste (HW). Federal regulations allow used oil to be managed with less restrictions than HW, if it will be recycled or reused.

In California, used oil is considered a HW and should be handled according to HW regulations.

**Note:** *Read and understand the following environmental guidesheets for a more in-depth discussion of hazardous material (HM) and HW management requirements:*

*Hazardous Material Overview (page 2);*

*Hazardous Waste Management Overview (page 4); and*

*Hazardous Waste Satellite Accumulation Area Management (page 8).*

### USED OIL MANAGEMENT COMPLIANCE CHECK

#### REQUIRED ACTIONS

- ✓ Store used oil in approved tanks or containers that are free of rusting, structural defects, and deterioration.
- ✓ Clearly label all used oil collection and storage containers, and fill pipes with the term "USED OIL."
- ✓ Inspect containers and oil storage areas for leaks, drips, tampering, or safety hazards.
- ✓ Use plastic spill containment pallets or similar equipment around drums to contain leaks or spills.

## USED OIL MANAGEMENT COMPLIANCE CHECK

### REQUIRED ACTIONS (cont'd)

- ✓ Promptly clean up any spills with absorbent materials such as Dry-Sweep, rags, or "oil socks."
- ✓ Fully recover used oil from parts, appliances, and materials before disposing of them. For example, puncture or crush oil filters and drain them into your used oil collection container before discarding filters in trash.

### CONTACT & COORDINATE

- ✓ Contact the installation safety and/or environmental office to schedule basic Hazard Communication (HAZCOM) or other training (e.g., used oil, spill plan requirements) if you handle used oil in your job duties.
- ✓ Contact your supervisor or unit environmental coordinator to verify how used oil is to be picked up from your shop.
- ✓ Record the results from inspections. Include maintenance or transport information in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not dump used oil into drains, sinks, trash containers, or onto the ground.
- ✗ Do not store used oil in open pails or pans, sumps, damaged or rusted containers, or containers that cannot be fully closed.
- ✗ Do not mix used oil with other waste materials.
- ✗ Do not smoke or use open flames near areas containing used oil.
- ✗ Do not burn used oil in furnaces, boilers, space heaters, or incinerators, unless specifically approved.
- ✗ Do not store used oil in lagoons or pits.

## AIR QUALITY MANAGEMENT OVERVIEW

Air pollution is a major environmental concern at United States Marine Corps (USMC) installations. Degraded air quality can impact both human health and the environment. Therefore, it is important that proper actions are taken to minimize air emissions. Various practices at installations have the potential to impact air quality. Major sources of air pollution commonly encountered at installations include, but are not limited to, the following:

- Solvent-based parts washer (degreasing) operations;
- Petroleum/oil/lubricant (POL) storage;
- Paint booths/painting operations;
- Combustion equipment (boilers/furnaces/generators);
- Maintenance/disposal of equipment containing ozone depleting substances (refrigerants); and
- Fuel dispensing and storage.

Because these practices may generate air pollution, regulatory agencies frequently require air permits that limit or restrict emissions from these sources.

Regulations regarding air emissions vary from state to state based on local air quality. Therefore, regulations and air permit requirements at one installation may not apply at another. Permits posted on equipment and at the installation environmental office can provide information on permit requirements or restrictions, or other regulatory requirements applicable to Marine Corps practices.

**Note:** *Read and understand the following environmental guidesheets to learn more about specific actions required to address air quality concerns associated with each practice:*

*Petroleum/Oil/Lubricant Storage Overview (page 20);*

*Degreasing Operations: Solvent Degreasing (page 32);*

*Paint Booths/Painting Operations (page 36);*

*Dry Abrasive Blasting (page 38); and*

*Grinding (page 40).*

## AIR QUALITY MANAGEMENT OVERVIEW COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Read all air pollution regulatory permits that apply to your duties and make sure that all requirements are met.
- ✓ Review the standard operating procedures (SOPs) with your supervisor or environmental coordinator before operating any equipment or activities with the potential to emit air pollutants.
- ✓ Obtain training prior to operating equipment.
- ✓ Inspect all equipment with air pollution regulatory permits to make sure they are properly maintained and operated.
- ✓ Perform recommended periodic maintenance on equipment such as replacing filters and fluids.
- ✓ Maintain all usage or operating logs and any other recordkeeping requirements.
- ✓ Obtain required air permits prior to installing new equipment.

### CONTACT & COORDINATE

- ✓ Contact the installation environmental office if you think your practices might require a permit.
- ✓ Contact your supervisor or unit environmental coordinator of any obvious malfunction of equipment; release of fuel, solvent, or paint that might cause air pollution; or evidence of smoke or odors.

### AVOID

- ✗ Do not leave containers of paints or solvents or the lids of parts washers open when not in immediate use.
- ✗ Do not conduct maintenance on any refrigerant-containing items (e.g., air conditioners, water fountains, refrigerators) unless you are properly trained and certified.
- ✗ Do not vent refrigerant to the atmosphere.
- ✗ Do not dispose of refrigerant-containing items as solid waste without first recovering the refrigerants.

## DEGREASING OPERATIONS: SOLVENT DEGREASING

Solvent degreasing uses parts washers to remove oils and greases from parts. In some parts washers, the part is immersed in a liquid solvent and the oil and greases are flushed away. In other parts washers, the parts are suspended over a heated solvent tank. Vapors rise and condense on the part to dissolve the oils and greases, which drip back into the tank. Both of these parts washers are typically used to clean small parts.

**Note:** Read and understand the environmental guidesheet which provides a general discussion of air issues:

*Air Quality Management Overview (page 30).*

### DEGREASING OPERATIONS: SOLVENT DEGREASING COMPLIANCE CHECK

#### REQUIRED ACTIONS

- ✓ Inspect piping, valves, and other parts to check for leaks or spills and to ensure the parts washer is operating properly.
- ✓ Inspect parts washers with pumps to make sure that there is a steady stream of liquid leaving the spout.
- ✓ Use the personal protective equipment (e.g., goggles, gloves) listed in the Material Safety Data Sheet (MSDS) for the solvent you are using.
- ✓ Check the solvent level to make sure that it is at (not above or below) the solvent fill line.
- ✓ Empty parts of liquid before placing them in the parts washer.
- ✓ Turn on the primary condenser before the heater.
- ✓ Make sure the solvent is at the proper temperature.
- ✓ Shut off the heater and allow the vapor blanket to collapse before turning off the condenser.
- ✓ Arrange the parts on the drying rack to help drainage.

## DEGREASING OPERATIONS: SOLVENT DEGREASING COMPLIANCE CHECK

### REQUIRED ACTIONS (cont'd)

- ✓ Drain parts immediately after cleaning for at least 15 seconds, until the solvent is done dripping, or until the part is visibly dry.
- ✓ Keep lid closed except when processing work.
- ✓ Clean up spills immediately.

### CONTACT & COORDINATE

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., fire, leak, physical damage).
- ✓ Contact your supervisor or unit environmental coordinator for necessary training on parts washers prior to operation and for information on the latest approved solvent degreasers.
- ✓ Call the installation Facilities Management Division (FMD) or Environmental Shop to schedule maintenance or servicing of the parts washer.
- ✓ Check the MSDS to get information on the solvents used in the parts washer.
- ✓ Record the results from inspections. Include maintenance, usage, repair, and delivery information in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not drain parts or equipment containing fluids (e.g., oil, hydraulic oils, radiator fluids) into the parts washer.
- ✗ Do not clean porous or absorbent materials such as cloth, leather, wood, sponges, or paper products in the parts washer.
- ✗ Do not open windows and doors or operate ventilation fans or anything else that will cause a draft near the parts washer.

## **DEGREASING OPERATIONS: AQUEOUS CLEANING**

Sink top parts washers are used to clean greasy or oily parts. The parts may be soaked in a bath of cleaning solution or the solution may be sprayed directly on them. You may scrub the parts by hand using a brush to help remove contaminants. The parts must be dried immediately after cleaning to prevent rusting. Sink top parts washers are mostly used for preventive maintenance or quick, light-duty cleaning. The cleaning solutions used are soaps or aqueous-based solutions composed mainly of water. They may include a number of additives such as corrosion inhibitors. They are typically nonflammable, non-ozone depleting, and contain little or no volatile organic compounds (VOCs). Some of the aqueous solutions may contain microbes that degrade oils and organic contaminants. This significantly extends the life of the cleaning solution bath.

### **DEGREASING OPERATIONS: AQUEOUS CLEANING COMPLIANCE CHECK**

#### **REQUIRED ACTIONS**

- ✓ Inspect piping, valves, and other parts to check for leaks or spills and to ensure the parts washer is operating properly.
- ✓ Use the personal protective equipment (e.g., goggles, gloves) listed in the Material Safety Data Sheet (MSDS).
- ✓ Change the aqueous solution only if cleaning performance declines.
- ✓ Skim oil to extend the solution life.
- ✓ Empty parts before cleaning them.
- ✓ Preclean extremely dirty parts by wiping them with a rag.
- ✓ Scrub parts to remove oils, dirt, and grime.
- ✓ Dry parts immediately after cleaning to prevent rusting.
- ✓ Keep lids closed except when processing work.

#### **CONTACT & COORDINATE**

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., fire, leak, physical damage).

## DEGREASING OPERATIONS: AQUEOUS CLEANING COMPLIANCE CHECK

### CONTACT & COORDINATE (cont'd)

- ✓ Contact your supervisor or unit environmental coordinator for necessary training on parts washers prior to operation.
- ✓ Call the installation Facilities Management Division (FMD) or Environmental Shop to schedule maintenance or servicing of the parts washer or for disposal of spent cleaning solution.
- ✓ Record the results from inspections. Include maintenance, usage, repair, and delivery information in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not drain parts or equipment containing fluids (e.g., oil, hydraulic oils, radiator fluids) into the parts washer.
- ✗ Do not use aerosols or other chemicals above the parts washer.
- ✗ Do not unplug or turn off a parts washer that contains microbial cleaning solutions. Heat is required to keep the microbes alive.
- ✗ Do not dispose of parts washer wastewater down storm drains or sewer systems.



Parts washer at MAGTFTC Twentynine Palms, CA. The top is open for demonstration purposes only. Under normal circumstances, it is kept closed.

## PAINT BOOTHS / PAINTING OPERATIONS

Painting operations may include touch-up and manual painting operations, as well as spray painting in dry filter booths or water wash booths. Painting operations use hazardous materials (HMs), generate several types of waste, and produce air emissions. Paint, chemicals, and strippers are HMs and should only be ordered/mixed in quantities needed for the job and must be disposed of properly when used.

In touch-up and manual painting operations, paint pens and aerosol spray cans are used. This will result in empty containers that must be recycled or disposed of as hazardous waste (HW). In dry filter booths, a filter made of paper, fiberglass, cloth, or polystyrene is used to collect paint overspray. These filters need to be replaced periodically and may be classified as a HW. In water wash operations, a water curtain is used to collect the overspray. This results in a sludge that must be disposed of as HW. Painting operations can generate several other types of wastes.

Most paints, chemical strippers, and paint thinners contain volatile organic compounds (VOCs) that evaporate very quickly in the air. Therefore, it is important that personnel protective equipment be used to prevent overexposure to the painter, and painting operations be managed to prevent unnecessary environmental exposure.

**Note:** Read and understand the following environmental guidesheets to learn more about HM, HW, and air quality concerns:

*Hazardous Material Overview (page 2);*

*Hazardous Waste Management Overview (page 4); and*

*Air Quality Management Overview (page 30).*

### PAINT BOOTH / PAINTING OPERATIONS COMPLIANCE CHECK

#### REQUIRED ACTIONS

- ✓ Request/obtain/mix only enough paint necessary for the job.
- ✓ Close paint cans when not in use.
- ✓ Manage aerosol spray cans as directed by your supervisor or unit environmental coordinator.
- ✓ Completely use the paint or dispose of the liquid portion appropriately before disposing of the can.

## PAINT BOOTH / PAINTING OPERATIONS COMPLIANCE CHECK

### REQUIRED ACTIONS (cont'd)

- ✓ Close solvent containers except when filling.
- ✓ Re-use cleaning solvent, when possible.
- ✓ Clean up all spills.
- ✓ Dispose of used filters and other painting waste properly.
- ✓ Inspect the filters to make sure they are working properly by monitoring the pressure drop across the filter during use.
- ✓ Inspect the filter differential pressure (DP) gauge, manometer, exhaust fan, and any air pollution controls to make sure they are working properly.
- ✓ Install filters properly.
- ✓ Use a smaller paint spray gun cup to limit the amount of overspray.

### CONTACT & COORDINATE

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., fire, leak, physical damage).
- ✓ Contact your supervisor or unit environmental coordinator for necessary training on the paint booth, paint gun operation, and proper spray painting techniques prior to operation.
- ✓ Contact your supervisor or unit environmental coordinator before performing painting operations outdoors.
- ✓ Call the installation Facilities Management Division (FMD) or Environmental Shop to schedule regular maintenance or servicing of the paint booth.
- ✓ Record the results from inspections. Include maintenance, repairs, and paint usage in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not clean spray guns by spraying them into the filters.
- ✗ Do not use paints, solvents, or other painting materials that have not been authorized by the installation environmental office.
- ✗ Do not leave the lid off a partially empty can to cause the paint to dry.

## DRY ABRASIVE BLASTING

Dry abrasive blasting operations use air blasted media to clean surfaces or remove paint from primarily metal objects. Sand, glass, and plastic beads are the most widely used abrasive blasting media. The primary environmental concerns are the fine paint dust particles, often containing heavy metals or other contaminants, which cling to blast media and mix with the blast air. For this reason, blasting operations are conducted within a booth and all particulates are collected. Spent blast media often must be managed as a hazardous waste (HW).

There are abrasive blast media for different uses. It is important to obtain training in the type of abrasive blast media used in your particular blasting operation.

**Note:** *Read and understand the following environmental guidesheets to learn more about specific actions required to address HW and air quality concerns:*

*Hazardous Waste Management Overview (page 4); and*

*Air Quality Management Overview (page 30).*



Dust collector for blasting booth at MCB Camp Lejeune, NC.

## DRY ABRASIVE BLASTING COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Inspect filters, hoses, and nozzles used in the blast booth to ensure proper operation.
- ✓ Clean off objects blasted prior to removal from blast booth.
- ✓ Check blast media to determine when to replace with new material.
- ✓ Recycle blast media when possible.
- ✓ Wear personal protective equipment (e.g., gloves, goggles) while performing blasting operations or handling blasting media.

### CONTACT & COORDINATE

- ✓ Call the fire department or environmental office in the event of an emergency or unusual condition (e.g., fire, physical damage).
- ✓ Contact your supervisor or unit environmental coordinator for necessary training on the use of the type of abrasive blast media used in your operation.
- ✓ Contact the installation environmental office:
  - ❖ If you think your operations might require a permit. If a permit is required, make sure that all permit requirements are met.
  - ❖ To determine whether the waste material from abrasive blasting operations is hazardous.
- ✓ Record the results from inspections. Include maintenance, amount of blast media used, and repairs in a logbook as directed by the installation environmental office.

### AVOID

- ✗ Do not conduct abrasive blasting operations in an open space without proper equipment to contain the blasting agent and material.
- ✗ Do not dispose of waste blasting material before making a proper hazardous waste determination.

## GRINDING

Grinding operations involve the use of tools or machinery to remove excess materials or paint from a surface. It may also include polishing or altering a material, or preparing a surface for the application of a protective coating. The fine particles of paint or metal from grinding operations are major environmental concerns, as they can affect air quality and present a health hazard. Waste from grinding activities can contain high levels of heavy metals, is often a hazardous waste (HW), and can impact water quality if released into the environment.

**Note:** *Read and understand the following environmental guidesheets to learn more about specific actions required to address HW and air quality concerns:*

*Hazardous Waste Management Overview (page 4); and  
Air Quality Management Overview (page 30).*



Smoothing the edges of a metal piece of weather stripping as part of the preventive maintenance program in Operation Iraqi Freedom.

## **GRINDING COMPLIANCE CHECK**

### **REQUIRED ACTIONS**

- ✓ Inspect and replace ventilation filters, as needed.
- ✓ Conduct grinding operations in well-ventilated areas with exhaust fans.
- ✓ Make a proper waste determination before disposing of the grinding waste.
- ✓ Clean shop floor of all grinding waste.
- ✓ Wear personal protective equipment (e.g., gloves, goggles, masks) while performing grinding operations.

### **CONTACT & COORDINATE**

- ✓ Contact your supervisor or unit environmental coordinator for necessary training on operation of the grinding equipment or the control equipment (e.g., portable vacuum systems) prior to operation.
- ✓ Contact the installation environmental office to determine whether the waste material from grinding activities is hazardous.
- ✓ Record the results from inspections. Include maintenance and repairs in a logbook as directed by the installation environmental office.

## SOLID WASTE MANAGEMENT OVERVIEW

**Solid Wastes (SWs)** are materials that can no longer be used for their intended purpose and may include solid, liquid, sludge, semi-solid or contained gaseous material. Garbage, refuse, municipal waste, trash, and other discarded materials such as general office waste and food wastes are SWs. Even though these wastes do not exhibit the hazardous properties of hazardous waste (HW) (toxic, flammable, reactive, ignitable,) they must be properly collected and disposed of in order to protect human health and safety. Certain SW, such as food waste and pressurized containers, should be segregated from other waste for special disposal.

Many SWs can be recycled. This reduces the amount of waste going to landfills or incinerators, and saves valuable resources. Paper and paper products (e.g. cardboard, newspapers, catalogs, office paper), aluminum cans, brass, construction and demolition debris, metal, plastics, scrap metals, textiles, wood pallets, and yard waste can all be recycled.

At many Marine Corps installations, recycled materials are sold through a Qualified Recycling Program (QRP) and the net proceeds benefit Marine Corps quality of life programs.

**Note:** *Read and understand the following environmental guidesheets to learn more about specific management procedures required to address hazardous material (HM) and HW concerns:*

*Hazardous Material Overview (page 2); and*

*Hazardous Waste Management Overview (page 4).*



Dumpsters used for solid waste at MCAS Beaufort, SC.

## SOLID WASTE MANAGEMENT OVERVIEW COMPLIANCE CHECK

### REQUIRED ACTIONS

- ✓ Collect solid waste (SW) in sturdy, leak-proof containers (e.g., cans, dumpsters), except for bulky items such as appliances.
- ✓ Collect and store SW in a way that avoids fire hazards, pests, and other threats to human health and safety.
- ✓ Collect, bag, and transport any SW generated during field exercises to an appropriate dumpster or can. Brass should be collected separately for recycling.
- ✓ Follow posted signs regarding prohibited items.
- ✓ Segregate recyclable materials such as aluminum cans or plastic bottles.
- ✓ Clean up any spilled or wind-blown SW and place in an appropriate container.

### CONTACT & COORDINATE

- ✓ Contact the installation environmental and/or safety office to find out site-specific procedures for the SWs that are managed.
- ✓ Contact your supervisor or unit environmental coordinator to verify what types of SW may be placed in standard containers, and what types require special handling (e.g., liquid wastes, large bulky wastes) or separate collection (e.g., recyclable materials).
- ✓ Contact your supervisor or unit environmental coordinator if you do not have sufficient SW collection containers, or if you are unsure of how to handle or dispose of a certain type of waste.

### AVOID

- ✗ Do not dump liquids, uncontained food wastes, compressed gases, appliances and equipment, or large bulky wastes in regular SW containers unless you have obtained permission from your supervisor or unit environmental coordinator.
- ✗ Do not place military munitions; brass; petroleum/oil/lubricants (POLs); hazardous wastes; hazardous materials; or medical wastes in a regular SW container.

## SUMMARY

**COMPLIANCE CHECK: A PRACTICAL GUIDE TO ENVIRONMENTAL ISSUES** covers the most common compliance issues that Marines and civilians may encounter in the workplace. All personnel should:

- *Know how to operate equipment properly.*
- *Attend required training.*
- *Know what to do or who to contact in the event of an emergency.*
- *Follow established procedures, posted rules and signs.*
- *Ask, if you are unsure what to do.*

Following this guide will help personnel perform the environmental responsibilities of their jobs in a compliant manner while meeting their mission. Be aware that some states have more stringent requirements. Requirements also differ in Japan and other overseas locations outside the U.S. Contact your supervisor or unit environmental coordinator for more specific shop standard operating procedures (SOPs). Refer to the Contacts on the next page for a listing of the local environmental offices that can provide additional information on site specific environmental management plans, spill response plans, and local permit requirements. Hazardous waste and other environmental training courses are also available through these offices.

MCO P5090 series, *Environmental Compliance and Protection Manual*, provides additional guidance on Marine Corps environmental programs.



## CONTACTS

**MARINE FORCES RESERVE**

FACILITIES ENVIRONMENTAL

COM: (504) 678-4219

DSN: 678-8016

**MCAS YUMA**

ENVIRONMENTAL DEPARTMENT

COM: (928) 269-3201

DSN: 269-3201

**MCLB BARSTOW**

ENVIRONMENTAL DIVISION

COM: (760) 577-6937

DSN: 282-6937

**MCMWTC BRIDGEPORT**

ENVIRONMENTAL OFFICE

COM: (760) 932-1570

DSN: 839-1570

**MCAS MIRAMAR**ENVIRONMENTAL MANAGEMENT  
DEPARTMENT

COM: (858) 577-1108

DSN: 267-1108

**MCAS CAMP PENDLETON**

ENVIRONMENTAL DEPARTMENT

COM: (760) 725-8492

DSN: 365-8492

**MCB CAMP PENDLETON**

AC/S ENVIRONMENTAL SECURITY

COM: (760) 725-4512 / 4520

DSN: 365-4512 / 4520

**MCRD SAN DIEGO**

ENVIRONMENTAL OFFICE

COM: (619) 524-6579

DSN: 524-6579

**MAGTFTC TWENTYNINE PALMS**

NREA DIVISION

COM: (760) 830-7396

DSN: 230-7396

**MARINE BARRACKS**

SAFETY AND ENVIRONMENTAL OFFICE

COM: (202) 433-3960

DSN: 288-3960

**BLOUNT ISLAND COMMAND**ENVIRONMENTAL AND SAFETY  
SECTION (CODE 901-1)

COM: (904) 696-5140

DSN: 678-5004

**MCLB ALBANY**

INSTALLATION AND ENVIRONMENT

COM: (229) 639-5637

DSN: 567-5637

**MCB HAWAII**

ENVIRONMENTAL DEPARTMENT

COM: (808) 257-6920

DSN: 457-6920

**MCAS CHERRY POINT**ENVIRONMENTAL AFFAIRS  
DEPARTMENT

COM: (252) 466-4186 / 3631

DSN: 582-4186 / 3631

**MCB CAMP LEJEUNE**

AC/S I&amp;E/EMD

COM: (910) 451-5003

DSN: 751-5003

**MCAS NEW RIVER**ENVIRONMENTAL AFFAIRS  
DEPARTMENT

COM: (910) 449-6143

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**CONTACTS****MCAS BEAUFORT**

NREAO

COM: (843) 228-3102

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**MCRD PARRIS ISLAND**

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COM: (843) 228-3102

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**HQBN HQMC**SAFETY AND ENVIRONMENTAL  
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COM: (703) 614-1900, 7264

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**MCB QUANTICO**

NREA DEPARTMENT

COM: (703) 784-4030

DSN: 278-4030

**MCB CAMP BUTLER**

ENVIRONMENTAL DIVISION

COM: 011 (81) 6117 450241

DSN: 625-0241

**MCAS IWAKUNI**FACILITIES DEPARTMENT  
ENVIRONMENTAL DIVISION

COM: 011 (81) 827 79 3388

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**UNITED STATES MARINE CORPS**

**COMPLIANCE CHECK:  
A PRACTICAL GUIDE TO ENVIRONMENTAL ISSUES**

**2007**