

Appendix C

Unit Environmental SOP

This SOP is an example of a unit environmental SOP. Because each installation has different local, state, or HN requirements, this SOP **must** be modified based on consultation with the installation's environmental staff. The SOP is divided into six sections (maintenance, supply, NBC, communication, field-mess operations, and operations/training) which correspond to the typical unit organization (see Figure C-1, pages C-2 to C-20). Units should extract these sections and incorporate them into the appropriate section of its own SOP. Alternatively, a unit may use this sample as a guide in developing a stand-alone environmental SOP. While this approach elevates the visibility and importance of environmental issues and procedures, unit personnel in specific functional areas may overlook the information. A sample spill-response plan, list of recommended equipment that should be maintained in the unit/activity spill kit, and instructions for using the electronic spill report message formats can be found in Tab A (see Figure C-2, page C-21), Tab B (see Figure C-3, page C-24), and Tab C (see Figure C-4, page C-26), respectively.

**APPENDIX ____ TO ANNEX ____
ENVIRONMENTAL STANDING OPERATING PROCEDURES**

Unit Designation

Mailing Address

Date

1. References.

Installation Environmental SOP, Higher HQ Environmental SOP, and AR 200-1.

2. Purpose.

a. This appendix standardizes procedures for environmental compliance with federal, state, local, and HN laws and regulations. Failure to comply may result in the following:

- (1) Endangerment of personnel health and safety.
- (2) Citations by federal and state regulating agencies.
- (3) Civil or military penalties against offenders.
- (4) Delay or halt in mission accomplishment.

b. This appendix is applicable to all assigned or attached personnel and governs the environmental aspects of all unit activities.

3. Responsibilities.

a. Commander.

- (1) Establishes unit HM and HW management policy.
- (2) Ensures that personnel comply with the provisions of referenced SOPs, regulations, and public law.
- (3) Ensures that the ECO, the HM/HW coordinator, and senior personnel have received the proper training, and that they, in turn, train their subordinates.
- (4) Ensures that all personnel who are exposed to HM in the course of their work receive initial training within 90 days of assignment concerning the hazards to which they are exposed and the precautions required to protect themselves in the work environment. These personnel must also receive annual refresher training.

Figure C-1. Unit environmental SOP

(5) Ensures that all unit personnel receive initial environmental awareness training within 90 days of assignment and refresher training annually thereafter.

(6) Ensures all unit personnel have received hazard communication training (OSHA requirement).

(7) Ensures that all environmental training is properly documented, and records are filed in the unit operations/training office.

(8) Ensures that a self-inspection program is in effect for the unit.

b. Executive Officer.

(1) Serves as the commander's eyes and ears for environmental matters.

(2) Conducts periodic unit self-assessment surveys.

(3) Oversees environmental integration into staff operations.

c. ECO and HW/HM (MOS 9954) Marine.

(1) Provides advice on environmental compliance to the commander.

(2) Serves as a link between the unit commander and higher/installation headquarters' environmental staff.

(3) Performs other duties as outlined in Chapter 1 of this manual.

d. Maintenance Officer.

(1) Serves as the unit's HM/HW coordinator.

(2) Serves as the unit's spill response coordinator.

(3) Ensures accountability for all HM and HW.

(4) Ensures that HM and HW are stored and disposed of properly.

(5) Ensures that HM and HW spills are immediately contained and reported to the fire department and the installation's environmental office.

(6) Reports nonfunctional/inoperative treatment/collection facilities (oil/grease interceptors, floor drains, catch basins, waste tanks) to the installation's environmental office via the unit's ECO.

e. Motor Sergeant.

(1) Establishes and maintains an HW accumulation (HW less than 55 gallons) area with proper separation of incompatible products.

Figure C-1. Unit environmental SOP (continued)

- (2) Inspects HW accumulation areas weekly and documents results.
- (3) Ensures that leaking containers are overpacked and/or the uncontaminated contents containerized in functional containers.
- (4) Ensures that only waste oil is placed in the waste oil tank or drums.
- (5) Ensures that the waste oil tank or drums are pumped out when full or 90 days after previous pumping, whichever occurs first (check with installation EC).
- (6) Ensures that the washrack oil/water separator is clean and serviceable.
- (7) Maintains an inventory log of all stored waste products, to include exact location of each container.
- (8) Labels all HW containers properly as they are put in service and ensures turn-in and delivery to the DRMO or contractor and pick up within 90 days of accumulation start date (coordinate with the EMO).

f. Unit Supply Sergeant.

- (1) Initiates and processes turn-in documents (TIDs) for the turn-in of HM and HW.
- (2) Maintains a suspense file and validates receipt copies of TIDs for all scrap, HM, and HW shipped to the DRMO.

g. PLL Clerk. Requisitions mercury and lithium batteries with recoverability code "A" only upon turn-in of a like item and quantity.

h. NBC NCO.

- (1) Inspects all possible decontaminant solution 2 (DS2) and super tropical bleach (STB) accumulation sites (connexes, wall lockers, POL accumulation area, and so forth) to ensure that these products have been properly turned over to DOL/supply for consolidated storage.
- (2) If the unit is temporarily in possession of decontamination agents DS2 or STB:
 - (a) Ensures that DS2 and STB are stored in separate locations.
 - (b) Inspects containers monthly for leakage, and records results. Arranges for leakers to be overpacked and turned in to the DRMO.
- (3) Properly disposes of nuclear, biological, and chemical (NBC) related training material that is classified as hazardous according to installation directives and DRMO policies.

Figure C-1. Unit environmental SOP (continued)

i. Mechanics.

- (1) Place HW in properly designated containers.
- (2) Never place HW in a dumpster; this is an **illegal** disposal.
- (3) Promptly report leaks/spills to the motor sergeant and/or maintenance officer. Report spills directly to the fire department and installation's environmental office, if necessary, to ensure prompt response.
- (4) Wear proper protective clothing when handling HM or HW.
- (5) Keep HM and HW accumulation containers closed except to add or remove product.

j. Medics.

- (1) Segregate medical waste from non-medical waste at the point of generation.
- (2) Place medical waste in designated containers.
- (3) Wear proper protective clothing when handling medical waste.
- (4) Store collected medical waste in a secure manner/area.

k. Individual Soldiers.

- (1) Comply with the unit's environmental requirements and the installation's SOP.
- (2) Maintain environmental awareness throughout daily activities.
- (3) Provide recommendations to the chain of command on techniques to ensure compliance with environmental regulatory requirements.
- (4) Identify the environmental risks associated with individual and team tasks.
- (5) Support recycling programs.
- (6) Report HM and HW spills **immediately** to (phone number for spill reporting).
- (7) Make sound environmental decisions in the absence of a supervisor or specific command guidance by considering the following:
 - (a) Prior training.
 - (b) General guidance from the chain of command.
 - (c) Concept of right and wrong.

Figure C-1. Unit environmental SOP (continued)

(d) Common sense.

(e) Environmental ethic.

4. Safety.

a. Material Safety Data Sheet. MSDSs provide critical information for safeguarding human health and protecting the environment. This information includes the hazardous characteristics of the substance, the appropriate personal protective equipment (PPE), spill-response procedures, signs and symptoms of overexposure, and first aid procedures. MSDSs can be obtained through unit supply channels and should be maintained at each location where HM is being used. It is important to note that MSDSs are material- and manufacturer- specific, which means that each brand name of a chemical has a different MSDS.

b. Personal Protective Equipment. PPE is the primary means of safeguarding human health when handling HM/HW. The most important aspect when choosing the appropriate PPE for a given operation is the hazardous characteristics of the substance. Always refer to the manufacturer's MSDS before choosing the appropriate PPE. If the prescribed PPE cannot be obtained during a field or contingency operation, field-expedient PPE should be used to help protect soldiers when handling HM/HW or in the event of a spill. Leaders ensure that their soldiers and Marines have the appropriate PPE when exposed to HM/HW during handling. Recommended field-expedient PPE is listed below:

HM/HW stream

1. Fuel products
2. Oil products/lubricants
3. Antifreeze
4. Acid batteries
5. Medical waste
6. Pesticides

Field-expedient PPE

1. Field gloves, goggles, wet-weather gear
2. Field gloves, goggles
3. Field gloves, goggles
4. Double-lined field gloves, goggles, wet-weather gear
5. Field gloves, goggles, wet-weather gear
6. Consult the MSDS and Preventive Medicine

NOTE: Field-expedient PPE should only be used when the required PPE is not available since it does not provide the level of protection recommended by the manufacturer. Additionally, field-expedient PPE that is used to handle HM/HW should not be used for normal operations after being used as PPE.

Figure C-1. Unit environmental SOP (continued)

SECTION 1 - MAINTENANCE**1. General.**

- a. Select maintenance activity sites so that POL-contaminated water will not enter a storm drain.
- b. Conduct the following activities daily:
 - (1) Check the level of used oil in storage tanks. Schedule for tanks to be picked up when 3/4 full.
 - (2) Clean all foreign material from drip pans and above-ground oil tank screens.
 - (3) Empty refuse barrels when 3/4 full to prevent overflows.
- c. Procure, store, and use only those chemical products specifically authorized by the appropriate technical manual (TM) or lubrication order (LO) for the level of maintenance performed.
- d. Keep MSDSs for all chemicals/solvents/materials used in work areas in a file that is readily accessible to personnel who work there. Brief personnel on chemical hazards, protective clothing requirements, first aid, and spill response before they use hazardous chemicals.
- e. Use products that are safe and biodegradable, when possible.
- f. Comply with the Army's oil analysis program (AOAP) as a method of reducing the amount of waste oil produced.
- g. Properly label, segregate, and store HM.

2. Maintenance Bays.

- a. Conduct maintenance washing/steam cleaning at the motor pool's washrack—not in the maintenance bay. (Maintenance cleaning in the bays will be authorized only during extended, below freezing temperatures that interfere with the vehicle maintenance mission [applicable only if equipped with an oil/water separator].)
- b. Do not wash heavily soiled and/or oily maintenance bay floors with solvent or other unauthorized material. Clean up oil and fuel with dry sweep or rags only. Collect dry sweep and dirt in nonleaking containers as HW for disposal through the DRMO.
- c. Confine solvent use to solvent washing machines that meet the National Fire Prevention Association's safety regulation standards. Obtain approval for use of solvents, other than mineral spirits, from the installation's environmental office before use.
- d. Ensure that all solvent washing machines have lids, which remain closed when not in use.

Figure C-1. Unit environmental SOP (continued)

- e. Do not sweep or dump trash, garbage, nuts, bolts, and other solid waste into floor drains or mix with used dry sweep. Put such items into covered, leak-proof containers. Empty containers into dumpsters, as needed, to prevent spillover.
- f. Place drip pans under points of leakage on vehicles with known seeps and leaks to preclude discharges into wastewater collection systems. Drain all water from drip pans daily and dispose into a sanitary sewer drain protected by an oil separator.
- g. Use the exhaust ventilation system whenever a stationary vehicle is running inside the maintenance bay.
- h. Keep catch buckets in all floor drains that are designed for them. Inspect and empty dry sweep and trash daily. In bays not equipped with oil-water separators should keep floor drains permanently closed if HM/HW are handled or stored there.

3. Grease Racks/Pits.

- a. Use approved used oil tanks to collect and subsequently recycle used oil. (Grease racks and maintenance or inspection pits are designed for oil change and vehicle lubrication only.)
- b. Introduce only uncontaminated used motor oil into the used oil tanks. Use separate containers for hydraulic, transmission and brake fluids. Do not place solvent, fuel, water, antifreeze, dirt, dry sweep, hardware, or trash in used oil tanks.
- c. Dispose of used oil, transmission, and fuel filters in normal trash containers after draining for 24 hours and double bagging in plastic. (Units/installations should purchase equipment for pressing oil from filters and then recycling the metal.)
- d. Mark and position containers for new and used dry sweep at the grease rack to clean up spills or leaks.
- e. Keep floor of the grease rack and the immediate surrounding area free of POL buildup.

4. Washracks.

- a. Use washracks for light exterior washing only. Wash extremely soiled vehicles at the installation's central vehicle wash facilities.
- b. Obtain authorization from the installation's environmental office for cleaners used in washing activities, since cleaners will drain into the sanitary sewer. Post readable signs to indicate specific, authorized cleaners, solvents, or soaps.
- c. Do not use portable steam cleaners or clean engines at washracks. These activities cause the oil to suspend in the water and the separator to function improperly. Only use steam cleaners in designated areas.
- d. Do not pour POL products, solvents, antifreeze, or other regulated substances into washrack drains.

Figure C-1. Unit environmental SOP (continued)

- e. Position trash containers at washracks for disposal of refuse generated during the washing process.
- f. Do not sweep dirt and trash resulting from washing vehicles into the washrack or pile trash along the perimeter. Place trash in proper containers for disposal at the landfill. Report quantities of dirt in excess of what can reasonably be placed in a trash container to the installation for disposal.
- g. To prevent pooling and possible discharge into storm drains, immediately discontinue washing if a washrack drain becomes clogged. Notify a supervisor to call in a work-order request immediately. Maintain washrack as "out-of-service" until all necessary repairs are made.
- h. The motor sergeant will do the following on a daily basis:
 - (1) Check for leaking water hydrants and report leaks to the DPW or facility engineer work order desk.
 - (2) Check for proper policing of the washrack, and ensure that the area is free of trash, oil-soaked rags, and soil/sand.
 - (3) Inspect drains and sand traps to ensure proper operation of the washrack drainage system. Call the DPW work-order section if plugged.
 - (4) Inspect oil-water separator for proper operation.

5. Parts/Material Requisitioning and Storage Areas.

- a. Requisition the minimum quantity required for mission accomplishment.
- b. Ensure recoverability codes are used whenever applicable.
- c. Keep a copy of the applicable MSDS for each HM on-hand in a binder in the parts storage area.
- d. Label and segregate all HM from nonhazardous items.
- e. Make special indications for any materials that have shelf life considerations.
- f. Consider alternative, nonhazardous substitutes whenever processing a request for HM. Check with the installation's environmental office for suggestions.

6. POL Storage Areas.

- a. Store all POL products with secondary containment. Construct berms 1 1/2 times the volume of the largest container ("must contain the contents of the single largest tank plus sufficient freeboard for precipitation") stored in the storage area to preclude spillage outside the immediate area. Obtain exceptions to this policy from the installation's environmental office.

Figure C-1. Unit environmental SOP (continued)

- b. Store all HM in a location protected from the elements to maintain container integrity (to prevent rusting, protect labels from fading, and so forth).
- c. Inspect containers and labels weekly for leaks and incomplete/unreadable or out-of-date labels. Stop leaks in containers (overpack the container or place the contents in a nonleaking container.) Maintain legible labels to reflect actual container contents.
- d. Maintain an inventory of POL products. Keep MSDSs on hand for any HM present.
- e. Use POL and other HM stock on a FIFO basis.
- f. Do not tip a drum on its side to issue POL products outside the POL storage area. Use transfer pumps (preferred method) for dispensing POL products.
- g. Place a drip box or pan under the supply valve when drum is tipped on its side. Line boxes and pans with absorbent pads and maintain on a regular basis. Clean up spillage immediately using dry sweep in areas with concrete floors.
- h. Immediately report to the unit's ECO and the appropriate installation officials spills of any quantity that enter the environment (soil, water, or drain). (See Tab A.)
- i. Keep used oil free of contamination (water, dry sweep, hardware, trash, solvent, antifreeze), and store only in approved used oil above-ground storage tanks.
- j. Use separate containers to store used brake fluid, solvents, hydraulic, and transmission oils. (Should mixing of waste streams occur, the product becomes "waste contaminated with an unknown substance" and will require analysis by the DRMO before disposal.)
- k. Contact DRMO for pumping or turn-in, whichever applies, when used oil tanks/barrels are 3/4 full. (Units may be required to go through the installation's EMO which will, in turn, contact the DRMO.)
- l. Discontinue accumulation of used oils if leaks in storage containers are detected. Immediately report leaks to the unit ECO and the installation EMO.
- m. Obtain approved containers from the DRMO for proper disposal of contaminated dry sweep and other accumulated HW. Clearly mark containers for proper waste disposal.
- n. Dispose of used filters for oil, transmission, and fuel as normal trash after draining for 24 hours and double bagging in plastic. (Units/installations should investigate equipment for pressing oil from filters and then recycling the metal.)
- o. Permanently close all floor drains in maintenance areas where HM/HW are handled or stored and provide for secondary containment single wall containers. Do not store HM near sanitary or storm sewer drains. Immediately report any amount of POL spillage entering a floor or storm drain to the unit's ECO and the installation's EMO.

Figure C-1. Unit environmental SOP (continued)

- p. Place each HM container of five gallons or more accumulation capacity in a POL shed or portable secondary containment device. (If these storage means are not available, the storage area will be bermed to contain 1 1/2 times the largest container volume in the event of a spill.)

7. Fuel Dispensing and Storage Area.

- a. Two personnel perform the operation when filling any size container with fuel—one will run the pump, and the other will dispense the fuel. This procedure provides adequate manpower, to monitor the pump for leaks and shut off the pump in case of an emergency. It also prevents overfilling the container.
- b. Handle fuel contaminated with dirt and water as HW, and dispose through the DRMO.
- c. Dispose of oil-contaminated fuel as a result of fuel cell leaks or other mechanical system failure, as HW through DRMO.
- d. Contact the direct support unit for assistance and guidance if tankers or fuel pods must be purged.

8. Procedures for Accumulation Site.

Provide accumulation sites for used petroleum products and HW. Place sites above ground on a nonpermeable, bermed hard stand, label them; and locate them 50 feet or more from any building. Leaking, corroded, or otherwise deteriorated containers must be overpacked in DOT approved drums. Coordinate with the installation EMO for assistance in determining the appropriate overpack containers, labeling/marking requirements, arranging for pick up of used oil, and other HW/HM collection issues.

- a. Keep an accumulation log for each used oil or HW container in use. Specify as follows:
 - (1) Contents.
 - (2) Date the container was opened.
 - (3) Date and quantity of each addition to the container.
 - (4) Name of person adding to the container.
 - (5) Date container is filled or closed.
 - (6) Date the container is removed by DRMO.
- b. Store used oil and HW according to installation guidelines.
 - (1) Place all accumulation of HW on a nonpermeable bermed hard stand.
 - (2) Label and locate the stand 50 feet or more from any building.
 - (3) Protect the accumulated HW from the elements, including heat and cold.

Figure C-1. Unit environmental SOP (continued)

- (4) Provide an enclosure to keep containers free from obscuring snow cover to allow for routine visual inspections in areas prone to heavy snowfall.
 - (5) Store used greases, solvents, brake fluids, hydraulic fluid, motor oil, and antifreeze in separate containers.
 - (6) Keep containers (drums, cans, or tanks) closed, except when depositing waste, as a safeguard against spills and to prevent water from entering the containers.
 - (7) Obtain a replacement through the prescribed load list (PLL) section or the troop support office if 2 ½- or 2 ¾-inch threaded caps on 55-gallon drums are missing.
 - (8) Ensure that secondary containment is provided which is capable of containing 1½ times the volume of the largest container stored in the storage area.
 - (9) Do not accumulate HW in an open container; it is a serious violation of HW regulations.
- c. Leave the following headspace to prevent overflow due to expansion:
- 55-gallon drum 3 to 4 inches.
 - 5-gallon cans 1.5 to 2 inches.
 - 1-gallon can 1 inch.
- d. Dispose of used oil in an appropriate above-ground container.
- (1) Label the storage tank(s) USED OIL ONLY (by type such as motor oil, transmission oil, or hydraulic oil), and make certain personnel are trained to place only used oil in the tanks. If a 55-gallon drum is needed, use national stock number (NSN) 8110-00-823-8121.
 - (2) Ensure that waste-oil tanks are pumped on a regular schedule. Notify the motor sergeant or the unit's HM/HW coordinator if the tank fills up before the scheduled pick up date or the tank is not pumped on schedule.
- e. Use vermiculite (NSN 7930-00-269-1272) or absorbent pads to soak up puddles, and Safestep (NSN 7930-01-145-5797) or sawdust (NSN 7930-00-633-9849) to clean up hard stands if HM or HW is spilled. Place all contaminated soil and absorbent material in removable head drum(s) (NSN 8110-00-082-2626 or 8110-00-292-8121) and turn in to the DRMO. Notify the installation's environmental office (see Tab A).
- f. Overpack chemical products and POL contained in leaking, corroded, or otherwise deteriorated containers in approved drums, and dispose of them as HW through the DRMO. Contact the installation's environmental office for assistance in determining the appropriate overpack containers.
- (1) To be accepted for turn-in, waste material must be in a safe, nonleaking, durable container.

Figure C-1. Unit environmental SOP (continued)

(a) Overpack leaking containers in steel or plastic removable head overpack drums, available through the supply system.

(b) Pack leaking containers of liquids in absorbent material (NSN 7930-00-269-1272), available at the General Services Administration (GSA) store or through GSA or DLA catalogs.

(c) Overpack a leaking 55-gallon drum in an 85-gallon drum. Place an absorbent material all around a leaking, overpacked container, to include underneath the container and with the maximum amount possible placed in the space between the overpack container and leaking container. There must be 6 inches of absorbent on the bottom and top of the interior container, with at least 2 inches around the sides (adjust for different sized drums and overpacks).

(d) Overpack leaking containers of nonliquid HW in a serviceable container. Call the installation's environmental office or the DRMO when in doubt as to the type of container to use since many liquids such as battery acid cannot be packed in steel containers.

(2) Contact the installation's environmental office for a loaner if drums are not available for overpacking an emergency spill. Requisition a replacement drum for the installation's environmental office. Used drums are frequently available at the DRMO. Removable head 55-gallon drums (NSN 8110-00-082-2626) should be stocked by installation supply. Ensure that spill kits are procured for handling future spills.

(3) Request assistance from the installation's environmental office on compatibility of waste, packing, and labeling of containers. Maintain this information in the waste-stream file for each waste.

g. Inspect HW weekly. Document results of the inspection on a log and make accessible to state and federal inspectors. Identify description of waste, location, quantity, date accumulation started, end of 90-day period, date removed to the DRMO or by contractor, remarks (condition of storage area and containers), inspector's printed name, signature, and date of inspection. Coordinate this action with the installation's environmental office.

9. Vehicle Parking Areas.

a. Park vehicles only in designated parking areas.

b. Do not discharge any POL product or contaminated soil into or near a storm drain. This is forbidden. Vehicle parking areas drain into storm sewers; storm sewers drain into streams, which lead into the nearest surface-water body.

c. Place drip boxes/pans under all drip points of vehicles with potential for leaking POL.

d. Use dry sweep to clean up POL spills where vehicles are parked, and dispose as HW through the DRMO.

e. Do not wash vehicles on the vehicle parking line. Wash according to paragraph 4 of this SOP.

Figure C-1. Unit environmental SOP (continued)

- f. Ensure that no vehicle leaves the motor pool if it leaves a visible, continuous, or intermittent trail of POL on the ground (Class 3 leak).

10. Disposal of Empty Containers and Hazardous Items. Include information on turn-in of mufflers and exhaust pipes, brake shoes and clutch plates, fuel tanks, aerosol cans, PCB capacitor and transformers, hydraulic rams and gas cylinders, shock absorbers, oil- saturated wood and pallets, paint and paint containers, solvents and thinners, oils and greases, antifreeze, oily rags, sweeping compound, oil and fuel filters, washrack soil/sand residue, spill clean up debris and residue, and products with expiration dates.

- a. Turn-in procedures. The procedures for turning in HM varies widely due to differing state and local requirements. Seek the assistance of the supporting installation and DRMO, and should information on filling out and processing the turn-in document.
- b. Transport. Transportation of HW is strictly controlled. Check with the supporting installation and DRMO to determine if transport by the unit is allowed.

11. Refueling Operations.

a. General.

- (1) Conduct tactical refueling operations at a designated logistics resupply point (LRP).
- (2) Avoid conducting refueling operations in a unit's AO due to the safety hazards associated with maneuvering a fuel tanker or heavy expanded mobile tactical truck (HEMTT) and conducting grounding operations at each vehicle.
- (3) Ensure that POL section personnel conduct the actual refueling whenever possible.

b. Secondary containment.

- (1) Place secondary containment (large drip pans) under the vehicle and under the fuel hoses during refueling operations.
- (2) Place 5-gallon fuel cans inside drip pan when refueling, for secondary containment, preventing small volume fuel spills from accumulating and contaminating the soil.
- (3) Transfer spilled fuel to a labeled 5-gallon waste-fuel container, and dispose as HW.

c. Emergency equipment.

- (1) Fire fighting. Supply each refueling vehicle with a minimum of two fire extinguishers. Set up fire extinguishers on each side of the tanker or HEMTT during refuel operations to expedite emergency response measures. Ensure vehicles have their basic issue inventory (BII) items.

Figure C-1. Unit environmental SOP (continued)

(2) Emergency eyewash. Ensure that potable water is readily available for emergency eye washing to provide first aid measures on-site in the event a spill or leak occurs during refueling operations.

(3) Personal Protective Equipment. Ensure that each refueling vehicle has two sets of PPE. Reference the MSDS for required PPE, or reference paragraph 4 at the beginning of this SOP for field-expedient PPE. Wear gloves and goggles when conducting refueling operations. Use aprons or wet weather gear to respond to a spill or repair a leak. Ensure that this equipment is available.

(4) Spill response. Ensure that a copy of the spill response plan is readily available during all refueling operations.

12. Spills. (See Tab A for spill response plan. You should also refer to Graphic Training Aid [GTA] 5-8-3.)

a. Protect yourself and other personnel, stop the flow, and then contain the spill. Immediately contain and report all spills that have entered or threaten to enter floor or storm drains.

b. Report all spills according to the ISCP. Reporting procedures and reportable quantities may vary from installation to installation. The unit's spill response team conducts clean up. Allow light fuel to evaporate into the atmosphere; absorb oil with dry sweep or equivalent. (See Tab A.)

c. Report POL spills larger than one gallon of heavy oil or five gallons of fuel to the installation's fire department. (Check the ISCP for any differing local requirements.)

d. Conduct spill clean up per the spill response plan at Tab A. Additional cleanup guidance will be provided when the spill is reported.

e. Maintain (on-hand) supplies and equipment (absorbent materials) appropriate for initial containment of the types of spills possible in the unit. Refer to the MSDS associated with each product, or call the HW material section of the DRMO for guidance on the necessary spill response supplies to have on hand. Spill equipment and material will be similar to that contained in Tab B.

SECTION 2 - SUPPLY

1. Requisitioning. Check with the installation's environmental office for an up-to-date list of HM and guidance on the Army's HSMS. The HSMS, with its centralized management and strict inventory control, will reduce the use and disposal of hazardous substances.

a. Requisition the minimum quantity required for mission accomplishment.

b. When processing a request for an HM, consider alternative, nonhazardous substitutes. Check with the installation's environmental office for suggestions.

c. Ensure that recoverability codes are used whenever applicable.

d. Special indications will be made for any materials that have shelf life considerations.

Figure C-1. Unit environmental SOP (continued)

2. Storage.

- a. Label and segregate all HM from nonhazardous items.
- b. Keep a copy of the applicable MSDS for each HM on hand in a binder in the HM supply storage area.

3. Turn-In/Disposal. Check with the supporting installation and DRMO for local requirements for turn-in of HW and unused HM.

- a. Keep an accumulation log for each HW that is awaiting turn-in to DRMO. Identify the date each container was opened, date and quantity of each addition to the container, name of the person adding to the container, date container is filled or closed, and date of turn-in to DRMO.
- b. Keep turn-in documents for HM and HW on file for two years. Keep HW manifests on file for fifty years.

4. Paint.

- a. Do not open more than one can of each color of paint at any time.
- b. Store paints indoors in a non-flammable material locker or in a POL shed. Store paints by compatibility.
- c. Keep paint in original, labeled containers.
- d. Maintain an MSDS in the paint locker for each type of paint stored.
- e. Turn in any unopened, reusable, excess, or no longer needed paint products to the appropriate material management support activity, for redistribution or sale.
- f. Store all waste paint and thinners/solvents separate from unused or good paint products.
- g. Consult the installation EMO and chain of command for proper disposal of all paint.
- h. Store and dispose of paint thinners (HM) as directed by the environmental office and the DRMO.

5. Batteries.

- a. Exchange batteries on a one-for-one basis.
- b. Store used batteries separately by type while awaiting turn-in; accompany with an accumulation log. Coordinate with your local installation EMO to confirm proper labeling requirements.
- c. Ensure that there are no leaking batteries; handle carefully, and place leaking batteries in appropriate containers.
- d. Keep turn-in documents on file for a period of two years.

Figure C-1. Unit environmental SOP (continued)

SECTION 3 - NBC

- 1. Requisitioning, Storage, and Disposal/Turn-In.** (See Section 2.)
 - a. Process all requisitions and turn-ins through unit supply.
 - b. Keep a copy of the applicable MSDS for each HM on hand in a binder in the storage area.
 - c. Store DS2 and STB containers in dry and well-ventilated separate locations.
 - d. Check daily DS2 and STB containers for leaks or corrosion.
 - e. Overpack and turn in to DRMO any DS2 or STB container found to be leaking.
 - f. Properly dispose of out-of-date chemical agent testing kits as HW.

SECTION 4 - COMMUNICATION

- 1. Requisitioning, Storage, and Disposal/Turn-In.** (See Section 2.)
- 2. Batteries.**
 - a. Issue batteries by exchanging them with used batteries on a one-for-one basis.
 - b. Immediately turn in used batteries to unit supply for storage while awaiting turn-in to DRMO.

SECTION 5 - FIELD-MESS OPERATIONS

Field-mess personnel use M-2 burners that operate on motor gasoline (MOGAS) during field and contingency operations. The major safety and environmental issues are fuel storage, filling, and lighting operations.

- 1. Fuel Storage.**
 - a. Store 5-gallon fuel cans closed at all times.
 - b. Do not attach open funnels or tubes to the containers. Maintain containers in good condition.
 - c. Do not use rusty or residue-covered containers. They are unsafe and unacceptable.
- 2. Filling operations.**
 - a. Conduct filling operations on a tarp or plastic liner with a soil berm or sandbag perimeter for secondary containment in the event of a spill.
 - b. Immediately collect spilled fuel using an absorbent material.

Figure C-1. Unit environmental SOP (continued)

- c. Place used absorbent material in DOT-approved containers, and dispose of as HW.

3. Lighting operations.

- a. Conduct lighting operations at least 50 feet away from fuel storage and M-2 burner filling operations.
- b. Conduct lighting operations on open soil so that any residual fuel will freely burn during the operation.

SECTION 6 - OPERATIONS/TRAINING

1. Training.

- a. Provide initial environmental-awareness training to all personnel within 90 days of assignment and annually thereafter.
- b. Train all personnel to accomplish their tasks according to laws and regulations and to respond properly in emergencies.
- c. Train all personnel that have contact with HM or HW within 90 days of assignment and annually thereafter. Ensure that personnel who have not yet received initial environmental training are properly supervised when they work with materials potentially hazardous to themselves or the environment.
- d. Document all environmental training and keep on file in the operations/training office.
- e. Identify quarterly requirements for ECO training. Request training allocations from the installation's EMO for two personnel (primary and alternate) in the installation's ECO course. Request an additional training allocation when either ECO is within 90 days of departure.

2. Risk Assessment.

- a. Complete an environmental-related risk assessment for all field training of platoon size or larger. (See Chapter 2 and Appendixes F and G.)
- b. Use checklists, found in Appendix E, for long-range, short-range and near-term planning, training execution, and training evaluation as an aid in minimizing negative environmental impacts for those areas found to have high risk.

3. Maneuver Damage.

- a. Designate a maneuver damage control officer for each field training exercise (FTX).
- b. Incorporate maneuver damage considerations into the OPORD for each FTX.
- c. Brief unit personnel on maneuver damage considerations and minimization measures before each exercise.
- d. Include maneuver damage as a discussion topic at all AARs.

Figure C-1. Unit environmental SOP (continued)

Tabs:

- A. Spill Response Plan.
- B. Spill Equipment and Materials.
- C. Electronic Message Report Formats.
- D. Field Procedures.
- E. POCs for Assistance.

Figure C-1. Unit environmental SOP (continued)

TAB A – SPILL RESPONSE PLAN

1. Immediate Action. A spill is defined as any quantity of petroleum product over five gallons (or according to local laws since some states are more stringent than five gallons) or any quantity of any other HW. Should a spill occur, the immediate actions are as follows:

- a. Protect yourself and other personnel.
 - (1) Evacuate the area, if necessary, due to the type of spill.
 - (2) Take personal precautions as detailed on the MSDS for the material spilled.
 - (3) Use the proper PPE.
 - (4) Extinguish smoking materials and all sources of ignition.
 - (5) Turn off power if there is the possibility of fire.
 - (6) Ventilate the area.
- b. Stop the flow (do it **safely**).
 - (1) Shut off valves, turn drums upright, and other procedures that will stop the flow, if possible.
 - (2) Do not take unnecessary chances, but stop the flow if it is possible without injury or contamination.
 - (3) Shower and change clothes as soon as possible if HW contamination occurs.
- c. Contain the spill (**quickly** and **safely**).
 - (1) Contain the spill by throwing absorbent, floor sweep, or dirt on it.
 - (2) Make dams to keep the spill from spreading further, and do not let it enter storm or sewer drains, or other water ways.
 - (3) Divert the flow to prevent the spill from entering any water source, including drains, if containment is not possible.
- d. Report the spill immediately.
 - (1) Report the spill to the supervisor/superior.
 - (2) Sound the alarm or give verbal warning.
 - (3) Have another person call the installation's fire department while you continuing to assess the size and severity of the spill.
 - (4) Immediately report to the unit ECO or the installation's environmental office spills of any HM other than a petroleum product, regardless of quantity.

Figure C-2. Tab A – Spill-response plan to unit environmental SOP

(5) The senior person in charge makes a copy of the pertinent MSDS for emergency response personnel in the event of a reportable spill.

e. Clean up the spill.

(1) Scoop up contaminated material and put it in a container. Mark the container with "Hazardous Waste, Contaminated Absorbent (Dirt)" if the spill occurred on concrete or asphalt and the spill was cleaned up with absorbent or dirt.

(2) Check with unit supply sergeant or the DRMO for proper disposal.

f. Replace spill equipment.

(1) Immediately after a spill is cleaned up, the spill response team's noncommissioned officer in charge (NCOIC) will account for all tools and supplies. The NCOIC will order replacement consumables (sweeping compound and rags) from unit supply. He will also identify missing property and initiate appropriate action (statement of charges or report of survey) to maintain accountability.

(2) The spill response team's NCOIC will ensure that spill kit inventories are complete before resealing the drums.

g. Maintain POC list for assistance (listed by office, name, telephone number, and building).

(1) Fire department.

(2) Installation's EMO.

(3) Unit's ECO.

2. Response and Clean Up Instructions.

a. Take the immediate actions in paragraph 1 above.

b. Ensure that any PPE specified in the MSDS is properly used.

c. Transfer the fluid to a serviceable container if the container is still leaking fluid.

d. Absorb the remaining spilled liquid with absorbent material. Use only the amount necessary to absorb the spill. Take remedial action if the spill is too large while waiting for the fire department.

e. Clean up the material with a nonsparking shovel or broom and place the residue in a serviceable container with a secure lid.

f. Label the container.

(1) Label the container—"POL SPILL RESIDUE"—for fuel, oil, or hydraulic fluid spills.

Figure C-2. Tab A – Spill-response plan to unit environmental SOP (continued)

(2) Label the container—“(Name of Chemical) SPILL RESIDUE - FLAMMABLE”—for flammable liquid spills (including solvents, paints, paint thinners, and alcohol).

(3) Label the container—“(Name of Acid) SPILL RESIDUE - ACID”—for acid spills.

- g. Store the container in the HW storage area while awaiting turn-in.
- h. Turn in the residue container to the DRMO.

Figure C-2. Tab A – Spill-response plan to unit environmental SOP (continued)

TAB B – SPILL EQUIPMENT AND MATERIALS

Each unit/activity should maintain a spill kit to respond to accidental releases and spills of HM. Below is a list of recommended equipment that should be maintained in the unit/activity spill kit. This list is not all-inclusive and should be expanded depending on the mission of the unit/activity. It is the responsibility of the unit/activity to purchase replacement or additional items to keep the contents of the kit stocked with necessary equipment. Additional kits must be purchased by the unit/activity that needs them, and additional quantities will be based on the likely size or frequency of potential spills.

Hazardous Material/Hazardous Waste Supplies

Containers (DOT or equivalent)

<u>NSN</u>	<u>ITEM</u>
8105-00-848-9631	Bag, polyolefin, 5 millimeters, 36 x 54 inch
8125-00-174-0852	Bottle, plastic, 1 gallon (polyethylene)
8125-00-731-6016	13 gallon
8125-00-888-7069	5 gallon
8110-00-254-5719	Drum, steel, 1 gallon*
8100-00-128-6819	1-gallon steel drum (17C)*
8110-00-254-5722	4-gallon steel drum*
8110-00-282-2520	5-gallon steel drum (17C)*
8110-00-254-5713	Drum, steel, 6 gallon (w/ring)*
8110-01-204-8967	Pail, shipping, steel, 5 gallon (DOT 17C)*
8110-00-519-5618	Drum, steel, 10 gallon (DOT 17C)*
8110-00-753-4643	19-gallon steel drum (17C)*
8110-00-366-6809	30-gallon steel drum (17C)*
8110-00-030-7779	30-gallon steel drum*
8110-00-030-7780	50-gallon steel drum (17C)*
8110-00-823-8121	55-gallon steel drum (17M)*
8110-00-030-9783	Drum, steel 55 gallon (bung & vent) (DOT 17E)*
8110-01-282-7615	Drum, polyethylene, 55 gallon*
8110-01-101-4055	85-gallon steel disposal drum (no lining)*
8110-01-101-4056	85-gallon steel recovery drum (epoxy phenolic lining)*
8110-01-101-4055	Drum, hazardous material*

* Refers to open top containers
 For bung container refer to federal logistics (FEDLOG) or contract the G-4

Figure C-3. Tab B – Spill equipment and materials to unit environmental SOP

AbsorbentNSN

7930-00-269-1272
 1939-01-154-7001
 5640-00-801-4176
 4235-01-423-1466
 4235-01-423-0711
 4235-01-423-1463
 4235-01-423-1467
 4235-01-423-1465
 4235-01-423-2787

ITEM

Clay, ground unit of issue (UI-bag)
 Nonskid absorbent (UI-40 bag skid)
 Insulation, thermal, vermiculite (UI-bag) (packing material)
 4 each 1 cubic foot bag
 1 each 1 cubic foot bag
 30 each 18 x 18 inch pillows
 20 each 2 inch x 10 foot sock
 10 each 4 inch x 8 foot booms
 10 inch x 10 foot booms

Spill PreventionNSN

8135-00-579-6491
 8135-00-579-6492
 4235-01-423-7214
 4235-01-423-7221

ITEM

Plastic sheet, clear
 Plastic sheet, black
 Spill kit
 Spill kit

Figure C-3. Tab B – Spill equipment and materials to unit environmental SOP (continued)

TAB C – ELECTRONIC MESSAGE REPORT FORMATS

References: FM 101-5-2, “US Army Reports and Message Formats,” 29 June 1999.

1. () ECR Format.

TITLE: ENVIRONMENTAL CONDITION REPORT (ECR)
 REPORT NUMBER: E035

GENERAL INSTRUCTIONS: Used to send periodic information (interim snapshots) of the environmental status of specific sites (assembly areas, base camps, logistical support areas, and medical facilities) where hazards are likely to occur and can result in significant, immediate and/or long-term effects on the natural environment and/or health of friendly forces and noncombatants. Sent in accordance with unit SOP and commander’s direction.

- LINE 1—DATE AND TIME _____ (DTG)
- LINE 2—UNIT _____ (Unit making report)
- LINE 3—LOCATION _____ (UTM or six-digit grid coordinate with MGRS grid zone designator of site/incident)
- LINE 4—DESCRIPTION _____ (Description of site/incident)
- LINE 5—CHANGES _____ (Changes from last ECR or EBS)
- LINE 6—HAZARDS _____ (Hazards to natural environment, friendly forces, and/or civilian personnel)
- LINE 7—ACTIONS _____ (Summary of actions to minimize hazards/remedial effects)
- LINE 8—UNIT POC _____ (Reporting unit point of contact)
- LINE 9—ASSISTANCE _____ (Assistance required/requested)
- LINE 10—REFERENCE _____ (Site specific EBS, if required)
- LINE 11—NARRATIVE _____ (Free text for additional information required for clarification of report)
- LINE 12—AUTHENTICATION _____ (Report authentication)

Figure C-4. Tab C – Electronic message report formats to unit environmental SOP

2. () Electronic Spill Report Message Format.

TITLE: SPILL REPORT (SPILLREP)
 REPORT NUMBER: S055

GENERAL INSTRUCTIONS: Used to send timely information or status of an oil, hazardous material, or hazardous waste spill that could have immediate environmental and/or health effects. Sent in accordance with SOP and commander's direction. NOTE: Spill reporting and reportable quantities are mandated by federal and local law.

LINE 1—DATE AND TIME _____ (DTG)
 LINE 2—UNIT _____ (Unit making report)
 LINE 3—DATE/TIME _____ (DTG of spill discovery)
 LINE 4—MATERIAL _____ (Material spilled)
 LINE 5—QUANTITY _____ (Quantity of spilled material)
 LINE 6—LOCATION _____ (UTM or six-digit grid coordinate with MGRS grid zone designator of spill)
 LINE 7—CAUSE _____ (Cause and supervising unit)
 LINE 8—SIZE _____ (Size of affected area)
 LINE 9—DAMAGE _____ (Damage to the natural environment, if required)
 LINE 10—HAZARDS _____ (Hazards to natural environment, friendly forces, and/or civilian personnel)
 LINE 11—ACTIONS _____ (Summary of actions taken)
 LINE 12—UNIT POC _____ (Supervising unit POC)
 LINE 13—ASSISTANCE _____ (Assistance required/requested)
 LINE 14—NARRATIVE _____ (Free text for additional information required for clarification of report)
 LINE 15—AUTHENTICATION _____ (Report authentication)

Figure C-4. Tab C – Electronic message report formats to unit environmental SOP (continued)