

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 17

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

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ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 17

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

SECTION 1: INTRODUCTION

17100. PURPOSE. This chapter establishes Marine Corps policy and responsibilities for compliance with statutory and procedural requirements for SW disposal, waste minimization, recycling, and resource recovery requirements.

17101. APPLICABILITY. See paragraph 1101.

17102. BACKGROUND. The Solid Waste Disposal Act (SWDA), as amended by the Resource Conservation and Recovery Act (RCRA), establishes requirements concerning the disposal and management of SW. The following types of facility activities may be subject to RCRA subtitle D, SW rules:

1. Thermal processing of 50 tons per day (tpd) or more of municipal-type SW;
2. Collecting and storing residential, commercial, and industrial SW;
3. Operating land disposal sites or using commercial off-site landfills for SW disposal;
4. Selling beverage containers; and
5. Purchasing products that contain recycled materials (40 CFR 247).

17103. FEDERAL STATUTES

1. SWDA of 1965, as Amended of 1976 (42 U.S.C. 6901 et seq.). The SWDA, normally now referred to as RCRA, requires that Federal installations comply with all Federal, state, and local requirements concerning the disposal and management of SW. These requirements include permitting, licensing, and reporting. The Act encourages the beneficial reuse of waste through recycling and burning for energy recovery.

2. RCRA of 1976 (42 U.S.C. 6901 et seq.). RCRA defines which SW's are hazardous and sets strict requirements for the handling of hazardous wastes (HW). RCRA bans the disposal of sludge and many liquids at SW disposal facilities. The Act encourages conserving and recycling SW with residual value. Subtitle D of RCRA establishes Federal standards for the management of nonhazardous SW. The primary goals of subtitle D are to encourage environmentally-sound SW management practices, the recycling of waste material, and resource conservation. Subtitle D has mandatory technical standards for nonhazardous SW disposal facilities.

3. Clean Air Act (CAA) of 1970, as Amended (42 U.S.C. 7401 et seq.). Section 112 of the CAA authorizes the Environmental Protection Agency (EPA) to set emission standards for hazardous air pollutants. In 1973, a standard for the control of asbestos fibers was issued as part of the National Emissions Standards for Hazardous Air Pollutants. Regulations addressing asbestos disposal in SW landfills are included in the CAA, section VI, Special Pollutants.

4. Military Construction Codification Act of 1982 (Public Law 97-214). Section 6 of the Military Construction Codification Act contains a provision that allows net proceeds from the sale of recyclable materials to be used by Marine Corps installations having qualified recycling programs (QRP) for certain purposes.

5. Federal Property and Administrative Services Act (FPAS) of 1949 (10 U.S.C. 484 et seq.). Section 203 of the FPAS contains provisions on the sale of recyclable materials.

6. Pollution Prevention Act (PPA) of 1990 (42 U.S.C. 13101 et seq.). This Act establishes the national policy that "pollution should be prevented at the source whenever feasible. Pollution that cannot be prevented should be recycled in an environmentally safe manner whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner."

7. Executive Order (EO) 12873, Federal Acquisition, Recycling, and Waste Prevention, October 20, 1993. This EO on Federal Acquisition, Recycling, and Waste Prevention, requires the Federal Government to make more efficient use of natural resources by maximizing recycling and preventing waste wherever

possible, in addition to using and procuring environmentally preferable products and services.

17104. REQUIREMENTS

1. SW Collection, Storage, and Disposal

a. Federal, state, and local requirements concerning collection, storage, and disposal apply to Marine Corps installations that.

(1) Generate SW, whether it is collected by the Marine Corps or by a nonmilitary collector.

(2) Dispose of SW on Marine Corps property, regardless of whether the waste is originated by the Marine Corps or other sources.

(3) Dispose of SW off Marine Corps property if the waste is generated by a Marine Corps installation and if the installation has direct management control over the disposal operation.

b. The 40 CFR 240-247 and 40 CFR 257-258 contain applicable Federal regulations for nonhazardous SW. Federal SW requirements have changed dramatically over the last several years, with most changes occurring in the following areas:

(1) Federal procurement of selected products containing recovered materials and post-consumer wastes, including oil, paper, tires, and building insulation; and

(2) Requirements for Municipal Solid Waste Landfills (MSWLF) (40 CFR 258).

c. Marine Corps waste materials (including trash, rubbish, dunnage, garbage, construction debris, and liquid waste) must not be burned in open fires, except in limited situations after considering health and safety issues and with the approval of the appropriate state or local agencies and the EPA regional office.

2. Thermal Processing of SW

a. Federal (40 CFR 240), state, and local requirements are applicable to thermal processing facilities designed to process 50 tpd or more of SW. For practical purposes, these requirements

apply to any facility designed to process, or which actually processes, an average of 2.1 tph or more (40 CFR 240.100).

b. Emissions must not exceed the existing air quality or emission standards established by the EPA, state, or local agencies. All water discharged from a thermal processing facility must be treated sufficiently to meet applicable effluent limitation standards. All necessary permits must be obtained from the appropriate Federal, state, or local agencies.

c. Thermal processing residue must be disposed of in an environmentally acceptable manner. Land disposal of residues must be per EPA guidelines for the land disposal of SW's. The guidelines also apply to those nonhazardous wastes which cannot be thermally processed for reasons of health, safety, or technological limitation.

3. Marine Corps-Owned Land Disposal Sites. The EPA promulgated requirements for MSWLF's which became effective on October 9, 1993 (40 CFR 258). The regulations address the design, location, construction, operation, closure, and post-closure of MSWLF's as follows:

a. MSWLF's and lateral expansions that stopped receiving SW on or before October 9, 1991, do not have to meet the requirements.

b. MSWLF's and lateral expansions that received SW after October 9, 1991, but stopped receiving SW on or before October 9, 1993, only have to meet the final cover requirements specified in 40 CFR 258.60(a). The final cover must have been installed no later than 6 months after receipt of the last wastes.

c. MSWLF's and lateral expansions that continue to receive wastes after October 9, 1993, must meet all of the requirements. Refer to 40 CFR 258.1(f) for site- and condition-specific exemptions for MSWLF's that continue to receive SW.

4. Marine Corps-Owned Land Disposal Sites. The EPA promulgated revisions to existing criteria for SW disposal facilities and practices, for Nonmunicipal Nonhazardous Waste Disposal Units that receive Conditionally Exempt Small Quantity Generator waste, which will become effective on January 1, 1998 (40 CFR 257.7 through 257.13 and 257.30), and July 1, 1998 (40 CFR 257.21 through 257.28). These regulations address location, groundwater monitoring, and corrective action.

5. SW Resource Recovery

a. General

(1) The EPA, with the cooperation of other Federal agencies, has surveyed Federal activities to determine SW disposal rates within Standard Metropolitan Statistical Areas (SMSA). The DON has been designated the lead agency in nine SMSA's by the EPA: Charleston-North Charleston, SC; Chicago, IL; Honolulu, HI; Los Angeles-Long Beach, CA; San Diego, CA; San Francisco-Oakland, CA; Norfolk-Virginia Beach Portsmouth, VA/NC; Pensacola, FL; and Philadelphia, PA. Similarly, the United States Army has been designated lead agency in the Baltimore, MD; Colorado Springs, CO; Columbus, GA/AL; and Washington, DC/MD/VA SMSA's. The United States Air Force is the lead agency in the San Antonio, TX, SMSA, and the Department of Transportation (DOT) is the lead agency in the New York, NY/NJ, SMSA's.

(2) The philosophy underlying resource recovery is that material or energy recovery from waste is possible at a point downstream from the point of generation, and is an alternative to landfilling, incinerating, or otherwise disposing of the waste in a manner harmful to the environment or wasteful of natural resources.

(3) Generation rates, discussed under resource recovery guidelines, are based on 260 days per year and 100 tpd, equivalent to 26,000 tons per year. The amount of SW is calculated from the volume that remains after implementing the source separation guidelines.

(4) Marine Corps installations located within SMSA's must participate with the DoD Components and Federal facilities in the establishment and/or utilization of a single resource recovery facility if:

(a) Any one Federal facility generates 50 tpd or more of SW after complying with waste reduction and source separation policies;

(b) The combined total of this SW from all Federal installations within an SMSA is 100 tpd or more; and

(c) Within a qualified SMSA, the Federal agency generating the largest quantity of SW is designated by the EPA as the lead agency and has the responsibility for implementing the guidelines in the SMSA.

(5) A Marine Corps installation outside a SMSA that generates 100 tpd or more of residential, commercial, and institutional SW after complying with waste reduction and source separation policies must establish and/or use resource recovery facilities to separate and recover materials and/or energy from SW. Installations outside SMSA's must follow these requirements:

(a) The installation must advise the CMC (LF) if it generates 100 tpd or more of SW.

(b) Where the SW generation rate is below 100 tpd, installations should consider a resource recovery facility in order to meet state or local laws on SW reductions and/or when it appears to be cost-effective. Special emphasis should be given to cooperating with community resource recovery efforts. Installations generating less than 100 tpd must advise the CMC (LF) if and when participation in a resource recovery facility appears viable.

b. Recycling Programs: Closed Loop Recycling and QRP's. DoD policy requires all installations and commands to:

(1) Establish recycling programs and procedures that:

(a) Ensure, where cost-effective, that all installations and activities have, or participate in, QRP's, and that these recycling programs are available to serve all host and tenant organizations occupying space on the installation, including leased space.

(b) Ensure, where cost-effective, that contracts awarded after the effective date of the this instruction that provide for contractor operation of a Government-owned or -leased facility located within the United States, its territories, or possessions include provisions that obligate the contractor to participate in a recycling program. Where cost-effective, existing contracts covering Government-owned/contractor-operated facilities should be modified to incorporate recycling provisions. Participation by contractors operating government-owned or -leased facilities overseas where recycling programs are available is required.

(c) Ensure that QRP procedures address recyclable materials, excluded materials, and other QRP materials.

(d) Divert recyclable materials from the nonhazardous SW stream where economically feasible. Individual types of

recyclable materials that make up a substantial percentage of the nonhazardous waste stream should be included in recycling programs, unless doing so will make the overall recycling program unprofitable. Recyclable materials do not require informal screening as defined in DoD 4160.21-M.

(e) Establish controls that ensure excluded materials, including those listed in 32 CFR 172.2(b)(3), are not sold through a QRP.

(f) Authorize installation commanders, as appropriate, to sell directly recyclable and other QRP materials or to consign them to the Defense Reutilization and Marketing Service for sale.

1 Installations must implement procedures ensuring that United States trade security control policies are followed in accordance with DoD 4160.21-M prior to directly selling firing range-expended brass or mixed metals gleaned from firing range cleanup that do not require demilitarization and that are Munitions List Items (MLI) or Strategic List Items (SLI). Expended brass must be crushed, shredded, or otherwise destroyed prior to public sale.

2 Reuse Screening. Prior to selling directly other QRP materials, installations must implement procedures for local reuse screening to consider reutilization, transfer, and donation programs in accordance with DoD 4160.21-M.

3 Ensure that outside the United States the disposition of recyclable and other QRP materials, derived from goods that have been imported duty-free, is accomplished, consistent with the provisions contained in status of forces, surplus, or excess property agreements or other international agreements with host nations.

(g) Ensure that the distribution of recycling proceeds is consistent with 10 U.S.C. 2577.

1 Sale proceeds will be used first to cover the costs directly attributable to all installation recycling programs, including, but not limited to manpower, facilities, equipment, overhead, and other capital investments. After these costs are recovered, installation commanders may use up to 50 percent of the remaining proceeds for environmental compliance, pollution prevention, composting, alternative fuel vehicle infrastructure support and vehicle conversion, energy

conservation, or occupational safety and health projects, with first consideration given to projects included in the installation's pollution prevention plan. Any remaining proceeds may be transferred to the nonappropriated Morale, Welfare, and Recreation (MWR) account for any approved programs.

2 An accounting and control system must be established for a recycling program that provides detailed management and audit information, tracks material quantity handled, calculates sales and handling costs for recycled material, and tracks expenditures made for appropriate projects and MWR programs. Integrity of the audit trail will be a priority concern.

3 Ensure that appropriate management controls are in place for recyclable materials that may be hazardous, such as lead-acid batteries.

(2) Operate a composting program or participate in a regional composting program, if it is practicable to do so.

c. High-Grade Paper. Waste high-grade paper generated at Marine Corps installations must be separated at the source of generation, separately collected, and sold for the purpose of recycling. Exceptions may be made only if analysis by the managing installation determines that a market for recovered products is not available, or that compliance is not economical. In situations where a Marine Corps office facility is a tenant activity, the host activity (or lessor) is responsible for establishing a source separation program. The Marine Corps office facility must encourage the establishment of such programs and cooperate by separating high-grade paper. The Marine Corps installation must consider the specific methods and systems recommended in current requirements (40 CFR 246) for implementing a source separation program.

d. Used Newspaper

(1) Installations should separate used newspapers generated in Marine Corps residential areas at the source of generation, and sell them for recycling. Exceptions are appropriate only if the managing installation determines through analysis that markets are not available or that compliance is not economical. Such analyses must include the applicable portions of the life-cycle costs associated with the operation, maintenance, closure, and post-closure of Marine Corps-owned

landfills, as well as the applicable cost of disposal by contract.

(2) Extensive news releases to residents for motivation and coordination should precede and accompany the program. Subsequent guidance should indicate the need for the program, the specific collection days, how to prepare bundles for collection, and the use of bulk containers outside multi-family dwellings. Consideration must be given to the specific methods and systems recommended in current requirements for the implementation of newspaper source separation programs.

e. Corrugated Container Waste. Installations should collect and sell waste-corrugated containers for the purpose of recycling. Exceptions are appropriate only if the managing installation determines through analysis that markets are not available or that compliance is not economical. Such analyses must include the applicable portions of the life-cycle costs associated with the operation, maintenance, closure, and post-closure of Marine Corps-owned landfills and the applicable cost of disposal by contract.

f. Resource Recovery Facilities. Marine Corps installations with resource recovery programs must follow requirements outlined in 40 CFR 243 and 245.

(1) Marine Corps installations that dispose of, or are responsible for, the disposal of residential, commercial, or institutional SW in amounts of 100 tpd or more (equivalent to 26,000 tons or more annually), after the implementation of source separation and other waste reduction procedures, must establish and/or use resource recovery facilities to separate and recover materials and/or energy from such SW. Such resource recovery facilities may be owned by the Marine Corps, Federal agencies, or local/regional governmental or commercial interests.

(2) Marine Corps installations must not compete with a locally-available commercial recycling industry that offers a total SW resource recovery system as directed by SECNAVINST 4860.44. Installations should make every effort to use an established commercial industry.

(3) Marine Corps installations should consider constructing resource recovery facilities only after a thorough study has been made of alternative methods for processing SW.

(4) Marine Corps installations should design resource recovery facilities to process all residential, commercial, and institutional SW disposed of at DoD facilities, and they should convert as much as possible of the input SW into recycled material, fuel, or energy.

g. Returnable Beverage Containers. Marine Corps installations must comply with state laws regarding beverage containers. They should bring to the attention of the CMC (LF) any conflicts between Federal (40 CFR 244) and state requirements, as well as any situations that preclude compliance.

h. Recyclable Materials Sales Program

(1) Marine Corps installations must use the proceeds from the sale of recyclable materials to cover the operation, maintenance, and overhead costs incurred in the recycling operation. Use any excess funds for pollution prevention, environmental compliance, energy and safety projects, and/or nonappropriated morale or welfare purposes.

(2) Only installations with a QRP may accumulate proceeds from the sale of recyclable materials. A QRP can be established by a base or station order and must include the following program requirements:

(a) Designate through the CG/CO the managing entity. Potential managing units include: environmental affairs facilities; morale, welfare, and recreation; or a similar staff entity.

(b) Ensure fiscal accountability for all funds received and disbursed as per MCO 7301.116.

(c) Record maintenance regarding the quantity and types of materials sold for recycling.

(d) Develop a method of prioritizing projects/ activities to be funded from net proceeds. This process is usually accomplished by establishing a committee consisting of a cross section of installation organizations. This committee recommends priorities for the disbursement of revenues to the CG/CO.

(e) Ensure that the CMC (LF) reviews all projects funded with the proceeds of recycling sales.

(f) Implement the requirements in this Manual for the sale of recyclable material.

(g) Notify the Defense Reutilization and Marketing Office (DRMO) that the installation has a QRP implemented by base or station orders as established by the Military Construction Codification Act. An installation may notify the DRMO and accumulate proceeds through the sale of recyclable materials during the period that a base or station order is being prepared.

(3) Marine Corps installations with QRP's may sell recyclable materials directly without using the DRMO. A cost analysis should be performed by the installation to determine if better value can be achieved for the QRP by performing direct sales.

i. Records Requirements

(1) Federal regulations require the Marine Corps to determine what actions will be, or have been, adopted regarding source separation requirements. In situations when a decision is made not to source separate, the decision must be based on a fully supported analysis. If a source separation program is adopted, the sale of recyclable materials obtained as a result of the source separation or resource recovery guidelines or the sale of used petroleum products, less the cost of sales and handling, may be administered through the Defense Logistics Agency (DLA) and DRMO under the provisions of DoD 4160.21-M or sold by the QRP per DoD policy. This procedure does not apply to waste materials turned over to voluntary organizations or civilian communities for recycling, or to military exchanges and commissary stores where the activity owns or leases its own processing equipment.

(2) The DRMO must deposit 100 percent of recyclable material sales proceeds net of cost obtained as a result of the source separation or resource recovery guidelines or the sale of used petroleum products to the account designated by a managing activity that operates the QRP. The designated account number must appear on the Disposal Turn-in Document in order for the DRMO to return the proceeds. Procedures governing the sale of recyclable materials must be consistent with section 203 of the Federal Property and Administrative Services Act of 1949. Although the screening for utilization, transfer, and donation as described in DoD 4160.21-M is not required prior to offering recyclable materials for sale, such screening may occur at the discretion of the DLA director.

j. Procurement. In 40 CFR 247 and EO 12873, October 20, 1993, the product areas requiring affirmative procurement actions include: recycled paper, cement or concrete containing fly ash, retread tires, building insulation, and used oil. Marine Corps installations should promote procurement of these and other recovered materials.

6. Environmental Compliance. See chapter 4 of this Manual for information on policy, responsibility, and procedures for achieving compliance with applicable EO's, and Federal, state, interstate, and regional statutory and regulatory environmental requirements.

17105. TERMS AND DEFINITIONS

1. Composting. A controlled process for managing the degradation of plant and other organic wastes to produce a useful product that can be used as mulch or soil conditioner.

2. Environmental Management Hierarchy (EMH). National policy established by the PPA that "pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner." When assessing solutions to compliance requirements, installations and commands will employ EMH, emphasizing:

- a. Source reduction.
- b. Recycling.
- c. Treatment.
- d. Disposal.

3. Excluded Materials. Excluded materials may not be sold through a QRP, and the proceeds from their sale will not be returned to a QRP. Excluded items include, but are not limited to:

- a. Government-furnished material.

- b. Precious metal bearing scrap.
- c. HW (including household HW).
- d. Ozone depleting substances.
- e. Electrical components.
- f. Unopened containers of solvents, paints, or oil.
- g. Fuels.
- h. Material that can be sold (as is) as a usable item.
- i. Repairable items that may be used again for their original purposes or functions, e.g., used vehicles, vehicle, or machine parts, etc.
- j. Ships, aircraft, weapons, and other material required to be demilitarized or destroyed, as well as scrap resulting from demilitarization.
- k. All MLI's and SLI's as defined in DoD 4160.21-M (reference (y)), Defense Reutilization and Marketing Manual, 23 March 1990, except firing range-expanded brass and mixed metals gleaned from firing range cleanup.
- l. Types of surplus personal property whose sales proceeds must be deposited to accounts other than a QRP per 32 CFR 172, Appendix B. See below:
 - (1) Scrap generated from Naval Working Capital Fund (NWCF) activities;
 - (2) Usable personal property purchased by NWCF activities;
 - (3) Property purchased with commissary surcharge funds;
 - (4) Automatic data processing equipment owned by the General Services Administration;
 - (5) Property purchased for the Military Assistance Program or purchased with Foreign Military Sales administrative funds;
 - (6) Coast Guard property;

- (7) Property owned by nonappropriated fund activities;
- (8) Lost, abandoned, or unclaimed privately-owned personal property;
- (9) Property owed by a country or international organization; and
- (10) Bones, fats, and meat trimmings generated by a commissary.

4. Managing Activity. An administrative element assigned to manage the recycling program including personnel, funds, and equipment.

5. MSWLF's. A discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined under 40 CFR 257.2. An MSWLF also may receive other types of RCRA subtitle D wastes, such as commercial SW, nonhazardous sludge, small quantity generator waste, and industrial SW. Such a landfill may be publicly or privately owned. An MSWLF may be a new MSWLF, an existing MSWLF, or a lateral expansion.

6. QRP. An organized operation that diverts or recovers scrap or waste streams, and that identifies, segregates, and maintains the integrity of the recyclable materials in order to maintain or enhance the marketability of the materials.

7. Other QRP Materials. Materials that fit neither the definition of recyclable materials nor the definition of excluded materials are classified as other QRP materials.

8. Recovered Material. Waste materials and by-products that have been recovered or diverted from solid waste but such term does not include those materials and by-products generated from and commonly used within an original manufacturing process (42 U.S.C. 6903).

9. Recyclable Materials. Recyclable materials can include, but are not limited to: high quality paper and paper products; mixed paper, newspaper, cardboard; plastic; metal cans; glass; used oil (except when the oil is an HW); batteries; and tires. In addition, scrap (including ferrous and non-ferrous scrap), firing range-expended brass, and mixed metals gleaned from firing range cleanup that do not require demilitarization and that are MLI's

or SLI's may be included in a QRP. Expended brass must be crushed, shredded, or otherwise destroyed prior to public sale.

10. Recycling. The series of activities, including collection, separation, and processing, by which products or materials are recovered from the SW stream for use in the form of raw materials in the manufacturing of new products other than fuel for producing heat or power by combustion (from EO 12873, October 20, 1993, section 207).

11. Resource Recovery. The process of recovering material or energy from SW.

12. Resource Recovery Facility. Any physical plant that processes nonhazardous, commercial, or institutional SW biologically, chemically, or physically and recovers useful products, such as shredded fuel, combustible oil or gas, steam, metal, and glass, for resale or reuse.

13. SW. Any garbage, refuse, trash, rubbish, sludge, waste, or scrap from commercial, agricultural, industrial, or residential activities. This classification does not include any of those materials that are identified as HW.

14. Source Reduction. Source reduction, as defined in the PPA, is any practice that:

a. Reduces the amount of any hazardous substance (HS), pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, and disposal; and

b. Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants. The term includes equipment or technology modification, process or procedure modification, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control. Source reduction does not entail any form of waste management (e.g., recycling, treatment, and disposal).

15. Source Separation. The separation of recyclable materials at their point of generation by the generator.

16. Waste Office Paper. Materials such as letterhead, copy paper, miscellaneous business forms, stationary, typing paper, tablet sheets, and computer printouts and cards. Classified

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wastes are explicitly excluded, except when applicable security directives allow their inclusion.

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CHAPTER 17

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

SECTION 2: MARINE CORPS POLICY

17200. MARINE CORPS SOLID WASTE (SW) MANAGEMENT PROGRAMS

1. General

a. For disposal purposes, all SW generated at Marine Corps installations is considered property of the Government except in those situations when Marine Corps exchanges and commissary stores salvage and dispose of their recoverable resources. Marine Corps installations must strive to reduce SW generation. SW collection, disposal, and resource recovery programs at Marine Corps installations must be implemented in the most cost-effective and environmentally acceptable manner. Changing mission requirements and market conditions necessitate the periodic review of these operations as commercial facilities become available, or as the installation's industrial-type activities change. Marine Corps installations must comply with the guidance of MCO 4860.3, for SW collection, storage, and disposal; and with NAVFAC P-442, for the establishment and/or disestablishment of resource recovery/source separation programs. Contractors on Marine Corps installations must dispose of their SW per their contract requirements.

b. The Marine Corps will design SW disposal programs as total systems that consider the relative economic advantages of the latest technology as well as the potential for resource recovery. Explore shredding, compacting, energy recovery, and similar processes. Develop installation SW management plans according to the following hierarchy (for more information on the pollution prevention EMH, see chapter 15):

- (1) Source reduction.
- (2) Material reuse.
- (3) Recycling.
- (4) Energy recovery.
- (5) Disposal.

c. All Marine Corps installations and commands must comply with DoD policy for recycling programs and procedures in accordance with the specifications of appendix L (see paragraph 17104.4b).

2. Source Reduction. Marine Corps source reduction programs must incorporate the following, where feasible:

a. Composting to facilitate yard waste reduction.

b. Reducing excessive packaging, especially where packaging is used for attractive merchandising or convenience functions.

c. Reducing waste generation in an office by:

(1) Reusing materials (e.g., file folders, paper clips, interoffice routing envelopes).

(2) Dual-sided copying.

(3) Using electronic mail instead of paper memos.

(4) Reducing mail and distribution lists.

3. SW Resource Recovery

a. All Marine Corps installations, where cost-effective, must implement source separation for recycling and develop a single authorized QRP which has controls to ensure that excluded materials, including those listed in 32 CFR 172.2(b)(3), are not sold through the program. All Marine Corps commands/units and tenants must participate in the host activity's QRP. Materials for which proceeds can be obtained must be sold through the host's QRP. Industrial-funded activities must maintain separate accounting for recycled materials purchased with industrial funds.

b. All Marine Corps installations must establish an installation recycling program for the following purposes:

(1) To protect the environment and prevent the depletion of valuable natural resources;

(2) To comply with Federal, state, and local environmental laws and regulations;

- (3) To reduce the volume of waste disposed in landfills;
 - (4) To reuse readily available resources;
 - (5) To avoid excessive costs for the disposal of SW by other means;
- and
- (6) To obtain proceeds from the sale of recyclable material.

c. Marine Corps installations at a minimum must segregate the following materials for recycling:

- (1) Scrap metal,
- (2) High-grade paper,
- (3) Corrugated containers, and
- (4) Aluminum cans.

d. Consider exceptions to recycling these materials only in the following situations:

- (1) When state or local regulations do not require recycling.
- (2) When market analyses conducted by the DRMO or the managing activity indicate that the recovered materials cannot be sold or disposed of economically because of a lack of market demand. Such analyses must include the applicable portions of the life-cycle cost associated with the operation, maintenance, closure, and post-closure of Marine Corps-owned SW landfills and the applicable cost of disposal by contract.
- (3) When the net costs exceed the net income plus avoided costs for disposal by another means.

e. Make no exceptions where environmental laws and regulations require specific materials to be recycled or removed from the waste stream.

f. Develop appropriate management controls for recyclable materials that may be hazardous, such as lead-acid batteries.

g. Prior to any source separation effort, request from the DRMO an estimate of the market for recovered materials, including estimated returns from sales and the timing of market demand.

h. Screen QRP materials for reutilization, transfer, and donation prior to selling directly.

i. Consider the following additional materials in the development of recyclable material markets:

- (1) Glass.
- (2) Plastic.
- (3) Newspaper from housing areas.
- (4) Scrap wood.
- (5) Other waste as market demand arises.

j. Ensure that United States trade security control policies are followed prior to selling firing range-expended brass or mixed metals gleaned from firing range cleanup that do not require demilitarization and that are MLI's or SLI's.

k. Update economic analysis and market determinations as market conditions change significantly, and maintain such records on file at the managing installation.

l. To maximize recycling, consider handling recyclable materials that are not profitable for a QRP through SW contracts where the cost in the contract to have the materials recycled is less than the cost in the contract to dispose of the material. Ensure that the contract includes recordkeeping of quantities and types of material recycled in this manner.

4. Marine Corps Records

a. Each installation must determine what actions will be, or have been, taken to adopt source separation requirements. When an installation decides not to source separate, such a decision must be based on a fully supported analysis. To determine SW management requirements, each installation must keep records of disposed SW and materials recycled. Records may be kept in the form of weight tickets, the number and size of truckloads delivered, contractor billings, or any other means of accurately determining or establishing the rate and volume of SW generated.

b. After establishing an organized QRP or if recycling is concurrent with such program development, the installation must determine whether to sell material directly or through their DRMO. If material is to be sold directly, the QRP procedures must address the identification of recyclable materials, excluded materials, and other QRP materials. The installation must coordinate with the DRMO when selling through the DRMO to determine whether the specific material to be sold actually is recyclable material. Refer disputes through the chain of command. Proceeds from sales, regardless of the type of sales transaction, are returned to the installation as described below:

(1) All Marine Corps installations, including those that operate under NWCF, may participate in the program.

(2) Deposit proceeds from the sale of recyclable materials at an installation with a QRP to account number **F3875.27 "Budget Clearing Account (suspense)" as instructed by MCO 7301.116. Accumulated funds in account number **F3875.27 are not affected by fiscal year end, so that proceeds acquired during one fiscal year may be carried forward and merged with proceeds of subsequent fiscal years. The proceeds must be segregated within the account to allow accounting as to the amounts collected and their disposition.

(3) Withdraw proceeds first from account number **F3875.27 to cover costs of operations, maintenance, and overhead for the processing and handling the recyclable materials (including the cost of any equipment purchases for recycling purposes). Military personnel must not be reimbursed from the proceeds of this account. If funds from account **F3875.27 are not sufficient to cover the costs of processing and handling these recyclable materials within a fiscal year, funds normally available for operations and maintenance will be used to cover the remainder.

(4) If a balance remains, not more than 50 percent of that balance may be used at the installation for projects for environmental compliance, energy conservation, and occupational safety and health activities. Construction projects are limited to 50 percent of the minor construction authority and must be paid for with proceeds from the sale of recyclable materials. Environmental compliance, energy conservation, and occupational safety and health projects must not be included in the normal minor construction program if sufficient recycling proceeds are available at the installation.

(5) Any remaining balance may be transferred to one or more of the local nonappropriated fund instrumentalities supporting MWR activities at the installation as defined in existing DON regulations.

(6) If the balance of an installation's proceeds remaining in account number **F3875.27 exceeds \$2 million at the end of a fiscal year, deposit the amount in excess of \$2 million into the United States Treasury as miscellaneous receipts.

5. Marine Corps Solid Waste Annual Report (SWAR). This report is no longer required. The data that was collected on this report is now part of the Pollution Prevention Annual Data Summary (P2ADS). Specific guidance on P2ADS was provided in the CMC letter 5090 LFL/S-157, 26 January 1998.

6. Technical Assistance. NAVFACENCOM EFD's/EFA's will provide technical assistance to Marine Corps installations upon request.

17201. MARINE CORPS INSTALLATIONS IN FOREIGN COUNTRIES. Outside the United States, the disposition of recyclable and other QRP materials, derived from goods that have been imported duty free, is accomplished in accordance with the status of forces, surplus or excess property agreements, or other international agreements with host nations.

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

CHAPTER 17

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY

SECTION 3: RESPONSIBILITIES

17300. CMC (LF) AND CMC (LFF)

1. Provide information and advice to installation commanders regarding proposed and final rules and regulations pertaining to SW management and resource recovery and uniformly apply Marine Corps policy as set forth in this Manual.
2. Ensure compliance with the specifications provided in appendix L (see paragraph 17104.4b).
3. Assist installations in resolving disputes with Federal, state, local, and foreign regulatory agencies as required.
4. Conduct special environmental compliance and protection studies with regard to SW management to assist in establishing policy or initiating actions.
5. Ensure, through field visits and the Environmental Compliance Evaluation Program, Marine Corps cooperation and compliance with Federal, state, and local regulatory agencies with regard to SW regulations.
6. Track Marine Corps progress toward meeting established SW minimization goals, using the P2ADS.

17301. CG/CO OF MARINE CORPS INSTALLATIONS AND COMMANDER MARINE FORCES RESERVE (COMMARFORRES)

1. Identify and submit to the CMC (LFL) and the CMC (LFF) project documentation and funding requests for SW management and resource recovery facilities that are required to maintain compliance with applicable existing and emerging regulations and permits. Program and budget for personnel, equipment, materials, training, and monitoring required to comply with SW management and resource recovery requirements. Pay appropriate Federal, state, and local fees. Ensure that the EMH is employed, pollution prevention alternatives evaluated, and life-cycle cost

impacts assessed, in evaluating and selecting projects that address compliance requirements.

2. Ensure that all required Federal, state, and local permits are applied for and obtained. Sign certifications and permit applications, as required, for construction of all SW management and resource recovery projects.
3. Ensure that a base or station order is written implementing local SW management and resource recovery policies.
4. Establish source separation programs and resource recovery facilities as feasible, and implement their operation through base or station orders.
5. If in a listed SMSA, cooperate with the designated SMSA lead agency.
6. Determine whether QRP or recycling sales programs are applicable.
7. Obtain applicable state or local permits and licenses for the site location and operation of on-site landfills.
8. Ensure that SW is disposed of according to applicable Federal, state, and local requirements.
9. Develop a system (e.g., listing, dumpster markings) to notify all base and unit personnel of the types of SW that may be placed in SW collection containers, and ensure that only those acceptable wastes are placed in the containers.
10. Ensure that off-base landfills receiving Marine Corps SW are licensed and are operating under applicable permits and regulations.
11. Ensure that Marine Corps installations located in the United States and its territories and possessions comply with certain Department of Agriculture (DOA) inspection and disposal requirements if they receive garbage from vehicles and/or aircraft arriving from outside the United States. These regulations are designed to prevent the spread of plant pests and animal diseases.
12. Develop SW management plans, including source reduction and recycling programs and resource recovery facilities as required.

13. Ensure that recyclable material direct sales performed by the QRP are performed in accordance with applicable laws and guidance.
14. Submit P2ADS data annually to NFESC and the CMC (LF).

17302. CG/CO OF MARINE CORPS COMMAND/UNIT AND TENANT TRAINING

1. Cooperate with the organization, lessor, or host activity that implements the SW management program outlined in this chapter.