

DEPARTMENT OF THE ARMY
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MEDCOM Regulation
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Medical Services
MANAGEMENT OF REGULATED MEDICAL WASTE (RMW)

Supplementation of this regulation and establishment of forms other than MEDCOM forms are prohibited without prior approval from HQ MEDCOM, ATTN: MCHO-LOZ.

1. HISTORY. This issue publishes a revision of this publication. Because the publication has been extensively revised, the changed portions have not been highlighted.

2. PURPOSE

a. To provide guidance to U.S. Army Medical Command (MEDCOM) organizations on the management of regulated medical waste (RMW).

b. To provide regulatory requirements for RMW management at facilities where regulations do not exist or are less stringent than this regulation.

c. To manage RMW in a manner which minimizes occupational exposure, protects both the environment and the public, and ensures compliance with appropriate Federal and Department of the Army (DA) regulations.

d. This regulation does not reflect regulatory variations found in many states or overseas jurisdictions. The user of this regulation must ascertain and adhere to state and local requirements. Medical facilities located outside of the continental United States (OCONUS) and its territories will adhere to their host nation Final Governing Standards (FGS) and where the FGS does not exist, the Overseas Environmental Baseline Guidance Document (OEBGD).

3. REFERENCES. References are listed in appendix A.

*This regulation supersedes MEDCOM Regulation 40-35, 9 June 2006.

4. EXPLANATION OF ABBREVIATIONS AND TERMS. Abbreviations and special terms used in this publication are explained in the glossary.

5. APPLICABILITY

a. This regulation applies to all personnel assigned, attached, or otherwise employed by the MEDCOM and its subordinate activities, to include subordinate commands, military treatment facilities (MTFs), dental activities, veterinary activities, and research facilities. The term “MEDCOM” or “activity” will be used throughout this document referring to MEDCOM and its subordinate activities.

b. This regulation implies that management requires implementing all engineering and administrative controls for bloodborne pathogens, and that employees use standard precautions and wear required personal protective equipment (PPE). The use of standard precautions does not change waste management programs recommended by the Centers for Disease Control and Prevention (CDC) for health-care settings nor does using standard precautions define the classification of waste.

6. DEFINITIONS

a. General waste - waste that is disposed by normal waste disposal methods without pretreatment. This includes garbage, rubbish, and non-regulated medical waste.

(1) Garbage - putrescible solid waste resulting from handling, preparation, cooking, or serving of food.

(2) Rubbish - nonputrescible solid waste comprising of the following two categories:

(a) Organic material. Examples include paper, plastics, cardboard, wood, rubber, and bedding.

(b) Inorganic material. Examples include glass, ceramics, and metal.

(3) Non-regulated medical waste - solid material intended for disposal which is produced as the direct result of patient diagnosis, treatment, therapy, or medical research. Such waste is generated in patients' sleeping, treatment, therapy, or isolation rooms (except where the patient is isolated because of an etiologic agent assigned to CDC's Biosafety Level (BSL) 4; see appendix B), and rooms used for diagnostic procedures, doctors' offices, and nursing units. Examples of non-regulated medical waste include, but are not limited to, soiled dressings, bandages, disposable catheters,

swabs, used disposable drapes, gowns, masks, gloves, and empty used specimen containers/urine cups. This waste requires no further treatment and is disposed of as general waste.

Exceptions: Medical facilities operating OCONUS and its territories may need to classify and manage some of the items listed above as medical waste. Personnel working at these facilities should reference the FGS, or the OEBGD, as applicable, for additional information. Similarly, some states within the United States also require management of all patient waste as RMW.

b. Regulated medical waste - waste generated in the diagnosis, treatment, or immunization of human beings or animals which is capable of causing disease or which, if not handled properly, poses a risk to individuals or a community. These wastes are also called "Infectious Waste," "Biohazardous Waste," "Clinical Waste," "Biomedical Waste," or simply "Medical Waste." Terms will vary based upon locality and will vary from state to state and country to country. Consists of the following categories:

(1) Group 1 - Cultures, Stocks, and Vaccines. Examples include cultures and stocks of infectious agents and associated biologicals, including cultures from medical and pathological laboratories; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.

(2) Group 2 - Pathological Waste. Examples are human pathological wastes, including tissues, organs, body parts, extracted human teeth, and body fluids that are removed during surgery or autopsy, or other medical procedures, and specimens of body fluids.

(3) Group 3 - Blood and Blood Products. Examples include:

(a) Free flowing liquid human blood, plasma, serum, and other blood derivatives that are waste. For example, blood in blood bags, blood and/or bloody drainage in suction containers.

(b) Items such as gauze or bandages, saturated or dripping with human blood, including items produced in dental procedures, such as gauze or cotton rolls saturated or dripping with saliva. Included are contaminated items that could release blood or related fluids if compressed.

Products used for personal hygiene (for example, diapers, facial tissues, and feminine hygiene products/sanitary napkins/tampons) that are saturated or dripping with blood

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are not subject to the requirements of this regulation. Trash receptacles located in public places which contain these products are also not regulated. Personnel need to use judgment in deciding when and whether these items need to be managed as RMW.

(c) Items caked with dried blood and capable of releasing blood during normal handling procedures.

(4) Group 4 and Group 7 - All Used (Group 4) and Unused (Group 7) Sharps. Examples include sharps used in animal or human patient care, treatment in medical, research, or support laboratories, or when used for live training purposes. This includes hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood collection tubes and vials, test tubes, needles attached to tubing, and culture dishes (regardless of presence of infectious agents). Other examples include broken or unbroken glassware that was in contact with infectious agents such as used slides and cover slips.

Note: Syringes without needles, not tainted with body fluids, and used for procedures such as irrigation, may be discarded into the solid waste unless otherwise regulated by state or local policy. Discard unused and non-infectious glassware in boxes designated and labeled for "broken glass"; these boxes are usually found in laboratories.

(5) Group 5 - Animal Waste. Examples include contaminated animal carcasses, body parts, and bedding of animals known to have been exposed to infectious agents during research, production of biologicals, or testing of pharmaceuticals. Carcasses of road kills, euthanized animals, animals dying of natural causes and waste produced by general veterinary practices are not considered Group 5 Animal Waste.

(6) Group 6 - Isolation Wastes (including bedding, from patients or animals with BSL Level 4 agents). Examples include biological waste and discarded materials contaminated with blood, excretion exudates, or secretions from humans who are isolated to protect others from highly communicable diseases, or isolated animals known to be infected with highly communicable diseases caused by BSL Level 4 agents as shown in *Biosafety in Microbiological and Biomedical Laboratories* (BMBL). This group includes pox viruses and arboviruses (see appendix B).

(7) Group 8 - Other. Fluids that are designated by the local infection control authority. They may include but are not limited to semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, and amniotic fluid. These designated fluids would be RMW when free flowing, dripping, or saturated on substrates.

(8) Group 9 - Chemotherapy Trace Wastes. Items such as needles, empty vials and syringes, gowns and tubing that contained chemotherapeutic pharmaceuticals or were exposed to chemotherapeutic pharmaceuticals during the treatment of patients.

7. GENERAL

a. Activity personnel will adhere to the principles of sustainability and pollution prevention by minimizing the use of disposable items, encouraging the use of reusable materials, and recycling to the maximum extent practicable.

b. The activity waste management system includes the segregation, by groups, of waste at the point of origin and the appropriate packaging, transporting, and treatment/disposal of waste in each group. A combination of three basic approaches is used to define RMW; that is, the infectious characteristics of the waste, the types, or groups of waste, and sources of generation.

c. The activity will assess its entire waste stream annually, more frequently when necessary, to identify and document processes and areas that generate RMW. A suggested list of areas that generally may or may not generate RMW is shown in appendix C; this list is not all-inclusive.

d. The following items shall NOT be placed into activity trash compaction systems: liquids, RMW, semi-solid waste (food service), universal waste, hazardous waste, empty containers from hazardous laboratory chemicals, un-punctured aerosol cans, chemotherapy and antineoplastic agents, and radioactive substances.

e. RMW and hazardous waste (HW) are different categories of wastes and are classified and managed by separate and distinct regulations. RMW will not be mixed with HW and, conversely, HW will not be mixed with RMW for purposes of disposal.

f. Guidance for RMW management in deployed and field settings is provided in Technical Bulletin Medical 593 – Guidelines for Field Waste Management.

8. RESPONSIBILITIES

a. The HQ MEDCOM staff proponent for this regulation is the Assistant Chief of Staff/Director of Logistics, assisted by the Proponency Office for Preventive Medicine (POPM) and the MEDCOM Environmental Management Office, Directorate of Installations, Environment and Facilities Management.

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b. The MEDCOM Activity Commander will ensure that RMW is identified and managed according to the policies and procedures provided in this regulation. Where this regulation conflicts with other regulations (for example, state, local, FGS, OEBGD), personnel will follow the most stringent regulation.

c. The Logistics Divisions of MEDCOM activities will arrange for, and supervise the collection, storage, transportation, and disposal of RMW, and the training of personnel in RMW management procedures.

d. Housekeeping, or other designated personnel, will collect and transport RMW to the appropriate facility holding area. They will also ensure that RMW bags are available to the facility staff after normal duty hours.

e. Facility supervisors will establish and use management controls and periodic inspections to ensure compliance with the policies and procedures in this regulation. Supervisors will plan, conduct, and document training of their personnel to ensure that RMW management is conducted safely and in compliance with established policies and procedures.

f. The MTFs Preventive Medicine (PVNTMED) office will assist the Logistics Division and supervisors by—

(1) Developing local RMW management implementing policies and guidance.

(2) Monitoring all phases of the management of RMW, including collection, storage, transportation, treatment, and disposal.

(3) Providing technical advice in identifying and characterizing RMW.

(4) Participating in the planning and providing of training.

9. PACKAGING, COLLECTING, MARKING, AND HANDLING OF RMW

a. Segregate RMW from general waste and HW at its point of origin.

(1) General trash. Manage and dispose of general waste according to existing published regulations; that is, Federal, state, and local requirements, AR 40-5; AR 420- 1, and DA Pam 420-47. Place regular trash and recycling containers at appropriate locations in the workplace to make segregation convenient and to minimize improper segregation.

(2) Regulated medical waste. Place items designated as RMW into a RMW container. Place sharps into a puncture resistant container designated for sharps use. Use RMW bags for all other medical waste items not designated as sharps. Carefully consider placement of bags and take precautions to use them on an "as needed" basis only. Refer to appendix C for areas in the hospital where RMW may be generated and where facilities should consider placing RMW collection containers.

b. Deposit RMW in leak-proof, puncture resistant, plastic bag lined receptacles. Use sturdy, tear resistant, red, 3-mil thick bags. In areas where RMW is rarely generated (for example, very small labs or clinics), personnel may use bags less than 3 mils thick as interim collection bags provided these thinner bags are placed in 3-mil thick bags prior to transport within the facility. Refer to state and local requirements and ensure bag thickness complies with these regulations. Meeting state requirements regarding the thickness, strength, or color of RMW bags for waste collection takes precedence over this regulation.

c. Securely tie and seal medical waste bags. Do not shake or squeeze the bags in an attempt to reduce volume and never compact or crush the waste to make room for more. Remember, bags serve as the primary barrier between the RMW and the worker. Coordinate with Infection Control and the Safety Office for additional instructions on safely sealing and labeling containers to meet your local requirements.

d. Carry sealed bags by their necks to the transportation cart. Do not lift or hold bags by the bottom or sides. Carry bags away from the body. Ensure bags are not broken, opened, or dropped. Never throw the bags into the carts.

e. Wear gloves and PPE appropriate for the task when handling bagged RMW. If necessary, obtain guidance from Infection Control, PVNTMED, and/or Safety.

f. When transporting RMW, or offering RMW for transport to a disposal contractor, in bulk packagings, use RMW bags that meet the Department of Transportation (DOT) requirements shown in 49 Code of Federal Regulations (CFR) 173.197(e) for tear and impact resistance. Bulk packagings are defined as having a capacity greater than 450 L (119 gal) or net mass greater than 400 kg (882 lb) per container.

g. Group 1.

(1) Cultures and Stocks. Separate microbiologic waste (cultures and stocks of etiologic agents) from general waste for decontamination. Liquid Group 1 RMW (for example, liquid culture media) may be either steam sterilized and disposed of in the sanitary sewer system or kept in its original glass container and placed in the sharps container for treatment and disposal without using the sanitary sewer system.

(2) Vaccines. Discard partially full or empty vials of vaccine in sharps containers. Dispose of nasal mist vaccine dispensers in non-sharps RMW containers. Full vials subject to the pharmaceutical return's vendor program must be returned to the pharmacy in original condition. Empty carpules from dental procedures that are broken or contain visible blood should be placed in sharps containers; otherwise manage unbroken carpules that do not contain visible blood as non-regulated waste.

h. Group 2 - Pathological Waste. Dispose of pathological waste inside an RMW container lined with a plastic bag or double bag in RMW bags.

i. Group 3 - Blood and Blood Products. Unless against local, state, or host nation law, bulk blood may be disposed into the sanitary sewer. Dispose of breakable containers of bulk blood or blood products in rigid, puncture-resistant, leak proof containers. Use plastic RMW bags to dispose of blood products such as blood bags and blood filter tubing, and items saturated, dripping, or caked with blood. Remove needles from the tubing (avoiding unsafe manipulation) and place in a sharps container for disposal.

j. Groups 4 and 7 - Sharps. Discard all sharps directly into a rigid puncture-resistant, plastic sharps container immediately after use. Discard disposable needles and syringes intact, do not cut, break, bend by hand, or recap using a two-hand method. To prevent unauthorized removal of its contents, the containers must be of a tamper-resistant design and will either be locked to a mounting device which is securely fastened to the building structure, or be located in a room or area which is under continuous supervision of ward or clinic personnel (AR 190-51). Locate sharps containers as close as practical to the use area. The size (volume) of the sharps container will be determined by the activity serviced by that container and must meet the requirements of paragraph 13d. Remove and seal the sharps container when it either is 3/4 full or is filled to the line indicated by the manufacturer. Sharps containers mounted on the wall will be positioned at a height to reflect safety standards for staff, patients, and visitors.

k. Group 5 - Animal Waste. Contaminated animal carcasses, body parts, and bedding of animals that are known to have been exposed to infectious agents during research; including those produced in veterinary facilities, production of biologicals, or testing of pharmaceuticals, must be managed as RMW and be incinerated. When implementing this regulation, specify if this type of animal waste is generated at the facility.

l. Group 6 - Isolation Waste (BSL Level 4 agents). Consult the infection control officer (ICO) for specific instructions on handling waste that contains BSL Level 4 agents (see appendix B).

m. Group 8 - Other. Consult the ICO for specific instructions on handling RMW fluids. Free flowing fluids may need to be collected in containers as designated by the ICO. Items that are dripping or saturated with infectious agents should be placed in RMW bags.

n. Group 9 - Chemotherapy Trace Wastes. Do not mix trace chemotherapy wastes with non-chemotherapy RMW or HW. Deposit chemotherapeutic trace wastes in containers provided by the medical waste disposal contractor. These containers are normally yellow in color. Consult the activity chemotherapy drugs protocol or contact the ICO and/or Safety Office for additional guidance.

10. STORAGE OF RMW

a. Store RMW, excluding pathological waste, in RMW storage areas. Mark the entrance(s) to the main storage area with the words “Regulated Medical Waste”. In addition to this marking, the universal biohazard symbol may also be used to mark the main storage area. Other information may be added, at the discretion of the MTF, or as required by state and local requirements. Keep the main holding area secure, free from pests (for example, insects, rodents, etc.), and in a clean, putrid free state. Indoor utility and storage rooms do not need to be secured when RMW is collected there unless dictated by local or state policy.

b. Storage of RMW must not exceed the storage times specified in current contracts for removal and disposal, and must not exceed the storage times specified by applicable state or host nation regulations. When conflicts exist, the most stringent time limits will be followed. Unusual or extenuating circumstances will be taken into consideration to allow brief or minor variances from storage time requirements.

c. Refrigerate or freeze pathological waste. Pathological waste generated at the veterinary clinic should be stored in the clinic freezer prior to pickup for disposal. The usual time for freezer storage of any RMW is approximately 30 days. Extracted human teeth need not be frozen if they are managed as RMW. Consult with PMS to determine management practices for extracted teeth (to collect in sharps containers or RMW bags). Contractual requirements or state/country rules, if more stringent, will be followed.

11. TRANSPORTATION WITHIN THE ACTIVITY

a. Carts used to transport RMW will be constructed of readily cleanable material, plastic, or stainless steel. If carts are equipped with lids, it is a good management practice to close the lids when transporting the RMW.

b. When carts or other reusable containers are used to transport RMW, they must be cleaned using an Environmental Protection Agency (EPA) registered hospital grade detergent/disinfectant or other facility approved antimicrobial disinfectants. State and local requirements must be considered when choosing a disinfectant. Housekeeping, or other designated personnel, will be responsible for timely transportation of waste within the facility, maintenance of carts, and the cleaning on a weekly basis, or more frequently if needed. If a spill occurs, the cart and impacted area will be cleaned immediately with a disinfectant.

c. Put bags of RMW in leak proof, rigid containers and mark the containers with the universal biohazard symbol. Red bags do not need to be marked with the universal biohazard symbol unless required by state or local regulations.

d. Do not collect chemotherapy trace waste with non-chemotherapy trace waste (or HW) in the same container. Place chemotherapy trace waste in separate leak proof, rigid containers and mark the containers with the universal biohazard symbol.

e. RMW from outlying buildings located on the installation or health service area, will be collected on a schedule approved by the facilities' environmental, infection control, and/or safety officials. See paragraph 10b for guidance on storage times of RMW.

12. TRANSPORTATION OF RMW ON THE INSTALLATION

a. When moving RMW between buildings that are within the boundaries of the installation (that is, "on post"), movement must be done in accordance with the installation's Transportation and Environmental Office. At a minimum, the RMW must be in rigid outer packagings and protected from shifting while being transported. Personnel moving RMW must have bloodborne pathogen training in accordance with Occupational Safety and Health Administration requirements. Designated shipping papers/manifests such as the document indicated in paragraph 13c are normally not required for "on post" transport of RMW. In all cases, MTFs should check with the installation Transportation Office for installation specific transport requirements (handling, spill response, and documents).

b. RMW must be transported in a government-owned or contractor-owned vehicle. The use of privately owned vehicles for transporting RMW is prohibited. The transporting vehicle must be disinfected if a leak or spill occurs during transportation.

c. A spill containment and cleanup kit will be maintained in each vehicle transporting RMW. The kit will include appropriate PPE, a disinfectant approved by the facility, and

appropriate absorbent and housekeeping equipment for cleaning up a spill. The kit may either be developed and assembled locally or commercially procured.

13. TRANSPORTATION OUTSIDE INSTALLATION BOUNDARIES

a. Facilities located OCONUS and its territories will reference the FGS, the OEBGD, country regulations, and local policies for specific transportation requirements of RMW.

b. In the continental United States (CONUS) and its territories, RMW is defined by the DOT as a hazardous material. When transported in commerce (for example, over public roads), prepare RMW for shipment following the requirements in Title 49, CFR Parts 100 - 185.

c. Prepare shipping papers according to 49 CFR 172.200 and applicable state requirements. Some states will require the use of a state mandated manifest. Shipping papers must be carried per 49 CFR 177.817.

(1) Only a certified official may sign shipping papers according to Department of Defense (DOD) 4500.9-R, Defense Transportation Regulations, Part II, Chapter 204. A DOD certified official is a person who has successfully completed an approved DOD hazardous materials certification course and is appointed in writing by his/her activity or unit commander, to include scope of authority.

(2) When shipping RMW that is not exempt by the Material of Trade exception paragraph 13g; DD Form 836 (Dangerous Goods Shipping Paper/Declaration and Emergency Response Information for Hazardous Materials Transported by Government Vehicles) is the standard shipping paper used for transporting hazardous materials on government vehicles. See appendix D for example of DD Form 836.

(3) The shipping activity must maintain a copy of the shipping paper for 2 years after the RMW is accepted by the initial commercial carrier per 49 CFR 172.201(e). State requirements may be different; many states require generators to maintain shipping papers/manifests for 3 years.

d. Outer shipping containers must meet United Nations (UN) and DOT requirements as stated in 49 CFR 173.197 unless they are being shipped by a private or contract carrier by motor vehicle. Contract carriers are those who are contracted with the MTF to transport and dispose of RMW. Outer shipping containers carried under these conditions are not required to meet the UN packaging requirements and do not need to have the UN specification marking.

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e. Packages of RMW must be marked in accordance with 49 CFR Part 172.300 and labeled in accordance with 49 CFR Part 172.400, as well as applicable state regulations.

Outer shipping containers holding trace chemotherapy waste must be marked in such a way to indicate that incineration is required. This may be done by affixing a label on the container or writing on it, or by checking the appropriate treatment method option if already printed on the container.

f. Persons who transport RMW over public roads must receive driver's training as specified in 49 CFR 177.816, AR 600-55, and applicable state requirements. A commercial driver's license is not required provided the gross weight of the vehicle used is less than 26,001 pounds. All military and civilian drivers of U.S. government-owned vehicles must have a valid state driver's license and a military driver's license (Optional Form (OF) 346, U.S. Government Motor Vehicle Operator's Identification Card).

g. Material of trade exception. There are a limited number of situations where a government employee driving a government vehicle (for example, a private carrier) is allowed to use the DOT material of trade exception (49 CFR 173.6), which provides some relief from many of the DOT requirements for transporting RMW. The specifics may also be obtained from the Hazardous and Medical Waste Program at the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM), 410-436-3651 or DSN 584-3651.

14. MANAGEMENT OF RMW SPILLS

a. The Infection Control Committee (ICC) and Safety Committee will approve policies and procedures that govern the management of RMW spills.

b. Clean RMW spills immediately with an EPA registered hospital grade detergent/disinfectant, or other facility approved disinfectant, which acts as a mycobacteriacide.

Use higher level disinfection when advised by the local or regional medical command (RMC) infection control authority. Carefully follow the manufacturer's instructions regarding the dilution of the detergent/disinfectant and contact time for disinfecting.

Note: State and local requirements must be considered when choosing a disinfectant.

c. Aerosolization of RMW is rare. If it should occur, allow the aerosol to settle and isolate the spill until it is safe to begin the cleanup.

d. PPE for cleanup workers:

- (1) Wear disposable waterproof gloves as a minimum.
- (2) Wear fluid-impervious gowns or other protective clothing when there is danger of soiling the workers' clothes.
- (3) Wear a mask and protective eyewear when there is danger of splashes or aerosols coming in contact with the workers' face and eyes.
- (4) Use engineering controls to pick up and dispose of any broken glass and larger volumes of RMW.
- (5) Report spills, when required, by following local procedures.

15. TREATMENT/DISPOSAL OF RMW

a. Regulated medical waste is generally removed by a waste disposal contractor within CONUS and OCONUS. Medical facilities located OCONUS and its territories must reference their host nation's FGS, or where the FGS does not exist, the OEBGD for specific treatment and disposal methods.

b. The following RMW treatment methods should be applied unless an alternative method is required by local or state regulations, or as required by the FGS or OEBGD. See appendix E for more information regarding treatment methods.

(1) Render liquid microbiological waste noninfectious via steam sterilization prior to disposal into the sanitary sewer system.

(2) Steam sterilize or incinerate solid microbiological waste prior to disposal in the general waste stream.

(3) Treatment of blood and blood products is not required prior to their disposal in the sanitary sewer system. When sanitary sewer disposal is not allowed by local ordinance, facilities may need to treat their blood and blood products via steam sterilization and/or use RMW bags and sharps containers for disposal.

(4) Refrigerate or freeze pathological waste if not picked up immediately for disposal (see paragraph 10 for storage guidance).

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(5) Decontaminate wastes containing CDC BSL Level 2, 3, and 4 etiologic agents (appendix B) by steam sterilization, incineration, or other approved disposal technology prior to disposal. Consult the ICO for further guidance.

(6) Vaccine waste requires no treatment prior to steam sterilization or incineration.

(7) Sharps containers require no treatment prior to incineration (or other approved disposal technologies).

(8) Store nonpathological RMW, destined to be picked up by the disposal contractor, in the designated RMW storage area (see paragraph 10 for storage guidance).

(9) Trace chemotherapy waste requires incineration.

16. CONTINGENCY PLANNING

a. Activities will maintain detailed written contingency plans for RMW disposal when primary means of disposal are unavailable. Contingency plans must include procedures for interruption of RMW disposal when the existing RMW contractor is unable to render expected services or when environmental conditions (inclement weather, natural disaster, etc.) temporarily prevent the pickup and removal of RMW.

b. Contingency disposal actions for permanent or extended interruption of primary RMW disposal mechanisms may consist of separate agreements with other RMW service providers, reciprocal agreements with other RMW generators, or some other mechanism that will ensure RMW is managed in a legal and environmentally sound manner. Contingency plans for permanent or extended interruption of primary RMW disposal mechanisms must, as a minimum, include the following information:

(1) Name, address, and phone number of contingency RMW disposal facility.

(2) Documentation of prior coordination (letter, memorandum for record, etc.).

(3) Terms of the agreement, such as:

(a) How much waste will be accepted.

(b) Waste treatment method.

(c) Transportation and removal mechanisms.

(d) Frequency of waste pickup/acceptance.

(e) Time limits for contingency disposal.

(f) Costs to RMW generating activity.

c. Contingency plans for the temporary interruption of RMW disposal may consist of securing additional storage space at the facility or at another location on the installation. Contingency plans must, at a minimum, include the following information:

(1) Capacity of current on-site RMW storage facility and estimated timeframe for how long this storage location can be used before reaching its maximum capacity.

(2) Identity of additional on-site contingency storage location(s), capacity, and storage timeframes for contingency storage location(s).

(3) Personnel responsible for managing and securing the contingency storage location(s).

(4) Mechanisms for transportation of RMW to the contingency storage location(s).

(5) Identification, by position/job function, those who will have access to the contingency storage locations and responsibility for handling RMW at this location.

(6) Climate control requirements for contingency storage locations, or the decision not to utilize climate controls due to the emergency situation.

(7) Details on whether the RMW will be transported back to the primary storage facility once the emergency event has ended, or if the RMW will be picked up at the contingency storage location.

(8) Details on training and/or credentials required for personnel working at the contingency location.

(9) Equipment to be available for use at contingency storage locations (PPE, spill equipment, etc.), and the location of that equipment.

d. Contingency plans will meet applicable local, state, and Federal regulations and must be reviewed and updated annually.

e. Activities will notify the Environmental Services Program Management Office, Operations Management Division, Office of the Assistant Chief of Staff for Logistics (MCLO-O), HQ U.S. Army MEDCOM prior to implementing any contingency plan actions that will result in additional RMW disposal costs or modification to contracted services.

f. Optional methods of disposal are shown in appendix E.

g. Special circumstances. RMW that has BSL Level 4 agents will pose problems for transportation, treatment, and disposal. Companies holding contracts for routine RMW removal and disposal are likely to refuse accepting RMW containing BSL Level 4 agents. See appendix E for alternative disposal methods.

h. Casualty/trauma decontamination. Following a suicide, violent death, or severe training accident, major blood contamination may occur on many and varied surfaces. Only properly equipped and sufficiently trained personnel shall clean up these spills. Employing, by contract, a private company that is skilled in this type of job should be considered. If properly trained, PMS personnel may assist in the cleanup. However, PMS's primary mission is to advise installation personnel assisting in the cleanup on appropriate PPE and cleaning/sanitizing solutions. PMS should coordinate with the ICO and the installation (or site) safety officials for additional input and guidance per the installation (or site) exposure control plan.

i. Emergency management. MTFs will plan for and exercise emergency management topics pertaining to waste management as part of their enhanced and focused Joint Commission survey preparations.

17. RMW DOCUMENTS AND GENERATOR FEES

a. Facility personnel will weigh and record RMW prior to off-site shipment and maintain these records for a minimum of 3 years. If the amount of RMW sent for treatment varies by more than 10% from the amount billed for disposal (or documented as having been disposed), the discrepancy must be brought to the attention of the facility's Chief of Logistics and the contracting officer representative (COR) of the disposal contract. The weight of reusable RMW containers must be subtracted from the disposal weight the facility is billed for by the contractor.

b. The RMW contractor will track each container of RMW removed from a facility through final disposal to ensure proper treatment. Documentation indicating a unique tracking number for each RMW container will be provided to the facility at the time of pickup. After the waste has been treated, a treatment record will be provided back to the facility indicating the unique tracking number of each container, the method of

treatment (that is, incineration, sterilization, etc.), and the treatment facility. RMW generators must ensure all RMW containers have been accounted for and properly treated by comparing the initial pickup documents to the final treatment records. All records will be maintained for a minimum of 3 years. Discrepancies must be brought to the activity's Chief of Logistics and the COR of the disposal contract.

c. All activities, regardless of the amount of RMW produced, must determine if generator, transporter, disposal, or other appropriate fees are required per state and local regulations. Activities must coordinate with the local Judge Advocate General's Office for a review of these requirements.

d. The MEDCOM environmental program funding documents should reflect the funding fees related to RMW disposal and expenses needed to comply with environmental regulations. Obtain additional guidance on this requirement from the PVNTMED office.

18. TRAINING REQUIREMENTS

a. Commanders will ensure that all employees are adequately trained to perform their duties.

b. Employers will train all activity employees who come in direct contact with patients, or who generate, segregate, package, store, transport, treat, or dispose of RMW, in the safe handling and management of RMW.

(1) Personnel having, or potentially having, occupational exposure to RMW will be evaluated under the facility's Exposure Control Plan and will receive annual training according to the Bloodborne Pathogens Standard (29 CFR 1910.1030), when required.

(2) The training should cover topics pertinent to the employee's primary job. Consult the ICO, safety manager, waste coordinator, or collateral-duty safety officer at the activity for technical assistance in determining pertinent information to be included in the training.

(3) The training will include topics related to general awareness, specific functions, safety, and security. Persons who sign shipping papers will receive specific training (see paragraph 13c). Drivers will receive driver's training (see paragraph 13f). Contractors whose duties involve handling or transporting RMW will have training that includes the topics discussed in this paragraph.

c. Initial training will include an orientation of local RMW worksite policies and procedures before the employee begins work. Recurrent training is required every

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2 years and will include a discussion of worksite policies, procedures, and new technologies.

d. The department/service/activity managers/leaders will maintain written documentation of all training for 3 years. Documentation will include topic(s), content summary, date, length of training, printed name and signatures of all attendees.

e. Department/service/activity managers/leaders will monitor and evaluate the training. Training topics will reflect assessment of the needs of the work center. For example, an increase in needle sticks may indicate a need to increase training in use of sharps disposal systems.

f. Only qualified instructors (personnel who are knowledgeable in the subject area and have had formal and extensive training in the material) may instruct classes and oversee training to meet these requirements. Training personnel should consider instructor work experience and technical competence (knowledge of the subject matter) when making instructional assignments.

Appendix A References

Section I Required Publications

AR 40-5, Preventive Medicine

AR 40-61, Medical Logistics Policies

AR 200-1, Environmental Protection and Enhancement

AR 600-55, The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing)

Biosafety in Microbiological and Biomedical Laboratories (BMBL) 5th Edition, U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes of Health Fourth Edition, February 2007,
<http://www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm>

EPA Guide for Infectious Waste Management, U.S. Environmental Protection Agency, May 1986. (EPA 530-SW-86-014)

CDC Guidelines for Handwashing and Hospital Environmental Control, 1985. Source:
http://www.cdc.gov/ncidod/hip/guide/handwash_pre.htm

CDC Guidelines for Isolation Precautions in Hospitals January 1996. Source:
<http://www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm>

CDC, Office of Biosafety. 1974. *Classification of Etiologic Agents on the Basis of Hazard*, 4th Edition. U.S. Department of Health, Education and Welfare, Public Health Service

DA PAM 385-69, Biological Defense Safety Program

DA Pam 420-47, Solid Waste Management

DOD 4500.9-R, Defense Transportation Regulation - Part II, Cargo Movement

DOD 4715.05-G, Overseas Environmental Baseline Guidance Document. Source:
<http://www.dtic.mil/whs/directives/corres/html/471505g.htm>

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Joint Commission Hospital Accreditation Standards, Environment of Care

Joint Commission Standards for Ambulatory Care

Title 29, Code of Federal Regulations, Part 1910.1030, Bloodborne Pathogens (29 CFR 1910.1030)

Title 49, Code of Federal Regulations, Parts 100-185, Pipeline and Hazardous Materials Safety Administration, Department of Transportation (49 CFR 100-185)

TG 149, Guidelines for Controlling Occupational Exposure to Hazardous Drugs

Section II Related Publications

AR 190-51, Security of Unclassified Army Property (Sensitive and Nonsensitive)

AR 385-10, The Army Safety Program

AR 420-1, Army Facilities Management

TB MED 530, Occupational and Environmental Health Food Service Sanitation

TB MED 593, Guidelines for Field Waste Management

Military Item Disposal Instructions, U.S. Army Center for Health Promotion and Preventive Medicine (<http://chppm-www.apgea.army.mil/newmidi/>)

Section III Prescribed Forms

There are no entries in this section.

Section IV Referenced Forms

DA Form 836, Dangerous Goods Shipping Paper/Declaration and Emergency Response Information for Hazardous Materials Transported by Government Vehicles

OF 346, U.S. Government Motor Vehicle Operator's Identification Card

**Appendix B
CDC Biosafety Level 4 Etiologic Agents***

Absettarov Virus	Hypr
Alkhumra Virus	Junin
Anthrax	Kumlinge Virus
Central European Encephalitis Viruses	Kyasanur Forest Disease (Presbytis spp.)
Central European Tick Borne Encephalitis Virus Complex	Lassa Virus
Congo-Crimean Hemorrhagic Fever	Machupo Virus
Ebola	Marburg
Far Eastern Subtypes	Omsk Hemorrhagic Fever
Guanarito Virus	Russian Spring-Summer Encephalitis
Hanzalova	Sabia Virus
Herpesvirus Simiae (Monkey B Virus)	Smallpox (and Smallpox-Like Cases)

*Source: Biosafety in Microbiological and Biomedical Laboratories (BMBL), U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Institutes of Health, Fifth Edition, Feb 2007, <http://www.cdc.gov/OD/ohs/biosfty/bmb15/bmb15toc.htm>.

This table will include other emerging pathogenic microorganisms when designated by the CDC or other Public Health officials.

A list of BSL 2 and 3 agents may be found on-line at the following CDC link: <http://www.cdc.gov/OD/ohs/biosfty/bmb15/bmb15toc.htm>, as well as at the American Biological Safety Association's Web site: <http://www.absa.org/riskgroups/>

Note: The World Health Organization (WHO) classifies etiological agents into four distinct risk groups. Those agents listed as Risk Group 4 usually cause serious human or animal diseases and can be readily transmitted from one individual to another, directly or indirectly, and for which effective treatments and preventive measures are not usually available. There is high risk to individuals and high risk to the community.

Many of the WHO Risk Group 4 agents are the same as those which the CDC places in the Biosafety Level 4 Group. Personnel using MEDCOM Regulation 40-35 should understand that a Biosafety Level 4 agent and a WHO Risk Group 4 agent have the same meaning for the purposes of this regulation.

Appendix C

Examples of Waste Generation Sites in a Medical Treatment Facility

1. All areas must use a rigid, puncture resistant, sharps container for disposal if they generate sharps. Sharps are used in animal or human patient care, or treatment in medical, research, or support laboratories. This includes hypodermic needles, syringes (with or without the attached needle), Pasteur pipettes, scalpel blades, blood collection tubes and vials, test tubes, needles attached to tubing, and culture dishes (regardless of presence of infectious agents). Other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips, are also included in this group.

2. The following administrative areas with direct or indirect patient contact normally generate nonregulated medical waste. The waste generated is general waste and will be disposed of as such.

- Headquarters
- Patient Administration
- Personnel
- Logistics
- Plans, Training, Mobilization and Security
- Nutrition Care
- Resource Management
- Information Management
- Nursing Education and Staff Development

3. The following areas with direct and indirect patient contact normally generate nonregulated medical waste. The waste generated is general waste and will be disposed of as such. Sharps generated in these areas are always considered RMW.

- Allergy/Immunization Clinics
- Social Work Service
- General Outpatient Clinics
- Pediatric Clinics
- Optometry/Ophthalmology Clinics
- Orthopedic Clinic, including Brace Shop
- Radiology, including Ultrasound
- Pharmacy Service
- Occupational Health Clinic
- Physical Examination
- Community Mental Health Clinic
- Veterinary Service (if not engaged in research)
- Urology Clinic

- Neurology/Neurosurgical Clinic
- Ear, Nose and Throat (verify if free flowing/saturated/dripping/caked blood)
- Central Material Section
- General Patient Wards

4. The following areas with direct patient care contact generate regulated medical waste (selected items) and will be disposed of as such. Sharps generated in these areas are always considered RMW.

- Operating Room
- Pathology Service
- Laboratory Services
- Blood Donor Centers (only in blood draw areas)
- Critical Care Areas
- Recovery Room
- Dental Clinics
- Veterinary Clinics

Appendix D

Appendix D contains the DD Form 836, Shipping Paper and Emergency Response Information for Hazardous Materials Transported by Government Vehicles, beginning on the next page.

HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT

DANGEROUS GOODS SHIPPING PAPER/DECLARATION AND EMERGENCY RESPONSE INFORMATION FOR HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES								
1.a. NOMENCLATURE: b. MODEL NO.: c. BUMPER NO.:				d. CONTAINER SEAL NO.: e. SERIAL NO.: f. TCN NUMBER:				
2. SHIPPER NAME/ADDRESS/TELEPHONE NO./DATE OF PREPARATION							3. PAGE _____ OF PAGES	
4. CARGO (To be completed by the unit or shipper Transportation Office (TO))								
UN/ID NUMBER a.	PROPER SHIPPING NAME (Include RQ, Technical Names, Additional information per 49 CFR172.203, as required.) b.	HAZARD CLASS/DIVISION c.	SUBSIDIARY HAZARD d.	PACKING GROUP (PG) e.	PACKAGES		TOTAL NET QUANTITY h.	TOTAL AMMO (NEW) i.
					NUMBER f.	KIND g.		
UN3291	Regulated medical waste, n.o.s.	6.2		II				
5. CONSIGNEE NAME								
6. REMARKS								
7.a. COPY OF EMERGENCY RESPONSE GUIDE NUMBER(S)								
b. EMERGENCY NOTIFICATION. In all cases of accident, breakdown or fire, promptly call emergency assistance telephone number(s) in Item 7c below and then shipper and/or consignee in Item 2 above, in that order.								
c. 24-HOUR EMERGENCY ASSISTANCE TELEPHONE NUMBERS:								
DOD NON-EXPLOSIVE HAZMAT: 1-800-851-8061 AT SEA: COLLECT: 1-804-279-3131	DOD HAZ CLASS 1 (EXPLOSIVES) ONLY: (703) 697-0218 or 0219 (COLLECT) OR DSN 227-0218 (WATCH OFFICER)	CHEMICAL/BIOLOGICAL WARFARE MATERIAL DUTY HOURS: DSN 584-3044, 584-7211, 584-6455, Comm. (410) 436-3044, (410) 436-7211, (410) 436-6455 AFTER DUTY HOURS: DSN 584-2148, Comm. (410) 436-2148 (Ask for TEU S3)	SECURE HOLDING: Non-AA&E: 1-800-524-0331 AA&E: 1-800-826-0794 OIL AND CHEMICAL SPILLS: NATIONAL RESPONSE CENTER (NRC) AND TERRORIST HOTLINE: 1-800-424-8802 AT SEA: 202-267-2675 (COLLECT)	DOD RADIOACTIVE MATERIALS: ARMY: (703) 697-0218 (COLLECT) USAF: (202) 767-4011 (COLLECT) USN/MC: Use 24-hour emergency response phone number provided by USN/MC activity initiating shipment. DLA: 1-800-851-8061 (AT SEA: (804) 279-3131)				
8. SHIPPER'S CERTIFICATION This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the regulations of the Department of Transportation.								
a. TYPE OR PRINT NAME OF SHIPPER CERTIFIER				c. SIGNATURE(S) OF VEHICLE OPERATOR(S)				
b. SIGNATURE OF SHIPPER CERTIFIER AND DATE								

DD FORM 836, DEC 2007

PREVIOUS EDITION IS OBSOLETE.

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HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT // HAZMAT

**Appendix E
Disposal/Treatment Methods**

Source/Type of Medical Waste	Regulated	Treatment/Disposal Method
Microbiologic cultures/stocks	Yes	Incineration, Thermal inactivation, Chemical disinfection (for liquids only), Steam sterilization followed by incineration or grinding (check w/ state/local regulations if end product should be unrecognizable)
Pathological wastes (includes surgery and autopsy waste)	Yes	Incineration, Steam sterilization followed by incineration or grinding (check w/ state/local regulations if end product should be unrecognizable)
Blood/blood products, caked blood including blood bags and tubing.	Yes, only if free flowing, saturated, dripping, or caked.	Steam sterilization, Incineration, Sanitary sewer system for liquids
"Sharps" both used and unused	Yes	Incineration, Steam sterilization followed by incineration or grinding (check w/ state/local regulations if end product should be unrecognizable)
Vaccines	Yes	Incineration, Steam sterilization followed by incineration or grinding (check w/ state/local regulations if end product should be unrecognizable)

Contaminated animal carcasses, body parts, and bedding	Yes	Incineration, Steam sterilization followed by incineration or grinding (check w/ state/local regulations if end product should be unrecognizable)
Communicable disease isolation	No, except for Biosafety Level 4 or WHO Risk Group 4 agent.	Check with ICO for guidance, Steam sterilization, Incineration
Dialysis wastes	Optional	Steam sterilization
Treatment/Examination Room*	No	General waste
General patient care areas*	No	General waste
Dental operatory*	Yes, only if free flowing, item saturation, dripping, or caked with blood.	Steam sterilization, Incineration, Sanitary sewer system for liquids
Intravenous bags and intravenous tubing	Check with state regulations	Steam sterilization, Incineration

* Unless the wastes fall into one of the categories above.

**More stringent state codes may require more stringent treatment/disposal methods.

Note: When the treatment/disposal methods shown above are not appropriate or feasible for the local situation, contracting for the transport and disposal of RMW is recommended. For planning purposes, activities must assume that RMW contractors will not accept for transportation any RMW that contains WHO Risk Group 4 or Biosafety Level 4 agents. Furthermore, activities should assume that commercial RMW treatment companies will refuse to accept for treatment and disposal any RMW that contains WHO Risk Group 4 or Biosafety Level 4 agents.

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Glossary

Section I Abbreviations

BMBL

Biosafety in Microbiological and Biomedical Laboratories

BSL

biosafety level

CDC

Centers for Disease Control and Prevention

CFR

Code of Federal Regulations

COR

contracting officer representative

CONUS

continental United States

DA

Department of the Army

DOD

Department of Defense

DOT

Department of Transportation

EPA

Environmental Protection Agency

FGS

Final Governing Standards

HW

hazardous waste

ICC

Infection Control Committee

ICO

infection control officer

MEDCOM

U.S. Army Medical Command

MTF

military treatment facility

OEBGD

Overseas Environmental Baseline Guidance Document

OF

Optional Form

OCONUS

outside the continental United States

POPM

Proponency Office for Preventive Medicine

PPE

personal protective equipment

PVNTMED

preventive medicine

RMC

regional medical command

RMW

regulated medical waste

UN

United Nations

USACHPPM

U.S. Army Center for Health Promotion and Preventive Medicine

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WHO

World Health Organization

Section II

Terms

This section contains no entries.

Section III

Special Abbreviations and Terms

This section contains no entries.

The proponent of this publication is the U.S. Army Center for Health Promotion and Preventive Medicine. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, U.S. Army Medical Command, ATTN: MCHO-LOZ, 2050 Worth Road, Fort Sam Houston, TX 78234-6000.

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