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1. Transmitted is a new chapter to Department of Veterans Affairs Veterans Health Administration Manual M-1, "Operations, " Part VII, "Environmental Management Service," Chapter 14, "Waste Management."
2. The purpose of this Chapter is to establish current policy concerning the scope and responsibility of Waste Management in VA medical centers.

3. **Filing Instructions**

Remove Pages

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14-i
14-1 through 14-10

4. **RESCISSIONS:** None.

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CHAPTER 14. WASTE MANAGEMENT

14.01 PURPOSE

The purpose of this chapter is to establish policy concerning the scope and responsibility of waste management in Department of Veterans Affairs (VA) health care facilities.

a. The identification, collection, handling, containment, transport, storage, reduction, treatment, and disposal of all health care facility generated wastes, constitutes the organization of the Waste Management Program. Inappropriate management of wastes negatively impacts other program elements such as sanitation, pest management, safety, security, etc. The reduction of generated wastes through product substitution, recycling, and reuse of products indicates an effective Pollution Prevention Program.

b. An emphasis on the selection and use of the most environmentally sound products, which meet operational needs, is essential to this integrated program. An employee, beneficiary, and Public Education Program, coupled with a structured employee training and certification program, demonstrates facility-wide involvement.

c. A well-managed program, one of multi-disciplinary involvement, cooperation, and commitment, is essential for a safe, clean, odor, and vermin-free environment.

14.02 POLICY

Each facility will develop and implement a policy memorandum which incorporates the following elements of an effective Waste Management Program:

- a. Waste stream assessment.
- b. Waste minimization strategies.
- c. Standard operating procedures to address:
 - (1) Generation and identification;
 - (2) Collection;
 - (3) Handling;
 - (4) Containment;
 - (5) Transport;
 - (6) Storage;
 - (7) Reduction;
 - (8) Treatment;
 - (9) Disposal;
 - (10) Security of sensitive data;
 - (11) Training, education, and certification;

- (12) Records maintenance;
- (13) Contingency and emergency planning; and
- (14) Quality assurance.

14.03 RESPONSIBILITY

a. The facility Director has the responsibility to ensure the establishment and maintenance of an effective Waste Management Program.

(1) The Director has options in determining how the necessary elements will be accomplished. The establishment of a Waste Management Committee (WMC) to encourage a program of continuous improvement, development, maintenance, and review of the Waste Management Program is recommended.

(2) The membership of the WMC should include, as a minimum the following, or their designees:

- (a) Chief, Environmental Management Service;
- (b) Chief, Acquisition and Materials Management Service;
- (c) Chief, Dietetic Service;
- (d) Chief, Engineering Service;
- (e) Chief, Laboratory Service;
- (f) Chief, Nuclear Medicine Service;
- (g) Chief, Pharmacy Service;
- (h) Chief, Research and Education;
- (i) Industrial Hygienist;
- (j) Safety Officer;
- (k) Infection Control Practitioner; and
- (l) Representative(s) of the bargaining unit(s).

b. The Chairperson, WMC, or the responsible waste management program official, will serve as the Waste Management Officer and must be at the organizational level of Service Chief and be appointed by the facility Director; no further delegation of that responsibility is permitted. The Committee, or program official, will report to the Administrative Executive Board, or its functional equivalent, and the chairman (or designee(s)) will sit on other administrative review committees for liaison purposes, e.g., Facility Safety Committee, Infection Control Committee, Commodity Standards Review Committee.

c. The WMC, or program official, will:

- (1) Review the existing facility-wide program,
- (2) Identify liabilities,
- (3) Examine opportunities for improvement, and
- (4) Document findings and recommendations for top management review and approval.

14.04 WASTE STREAM ASSESSMENT

Waste stream is a term which describes the flow of solid waste from generation to disposal. All solid waste (which by definition includes liquid and containerized gaseous wastes) is regulated by the Resource Conservation and Recovery Act (RCRA).

a. Solid waste, for Veterans Health Administration (VHA) purposes, consists of:

- (1) General waste,
- (2) Hazardous waste,
- (3) Radioactive waste, and
- (4) Special wastes.

b. It is important to identify the characteristics of health care waste generated locally; and it is better to limit any assessment to the quantity and composition of the waste stream(s) rather than attempt to perform any elaborate mass balance analysis.

14.05 SOLID WASTE

NOTE: *“The term ‘solid waste’ means any garbage, refuse, or sludge—and other discarded material including solid, liquid, semi solid, or contained gaseous material...” This statutory definition of solid waste comes from RCRA (as amended by Hazardous and Solid Waste Amendments of 1984 (HSWA)), and serves to indicate that all wastes, even those that are not designated as hazardous, must be managed to prevent pollution of the environment.*

a. These regulated non-hazardous wastes may be generated without registration or a permit, but are subject to specific prohibitions on treatment and disposal. Such wastes include:

- (1) Discarded food and food preparation wastes;
- (2) Human and animal excreta; and
- (3) Chemically stable solid wastes.

b. Most non-hazardous chemical wastes can be treated adequately by the waste water treatment process which receives waste discharged to the sanitary sewer. The Publicly Owned Treatment Works (POTW) must approve the discharge of wastes prior to such discharge.

14.06 HAZARDOUS WASTE

Except for listed hazardous wastes (40 Code of Federal Regulations (CFR) Part 261), a generator must determine which hazardous properties a waste possesses, using specific tests if necessary. Wastes are designated as hazardous when properties of substances in the waste meet or exceed the limits established under RCRA, or other regulatory authority.

a. In addition to listed hazardous wastes, EPA designates wastes that exhibit one or more of four characteristics as hazardous. These characteristics are:

- (1) **Ignitable.** Ignitable waste presents a fire hazard during routine handling.
- (2) **Corrosive.** Corrosive waste is capable of corroding standard containers or dissolving toxic chemicals in solid compounds.
- (3) **Reactive.** Reactive waste is capable of exploding or giving off toxic gas under normal climatic conditions or reacting violently with water.

(4) **Toxic.** Toxic waste is capable of causing illness, death, or restricting awareness so that a safety hazard develops.

14.07 RADIOACTIVE WASTE

Radioactive materials are primarily subject to regulation under the Nuclear Regulatory Commission (NRC), and/or the Department of Transportation (DOT). The Radiation Safety Officer must concur with the designated process of disposal of radioactive wastes.

a. Adherence to NRC and DOT regulations, concerning on-site management, transportation, and disposal of radioactive materials must be ensured. Most radioactives are subject to regulatory restrictions; they include:

(1) Disposal of licensed material in the sanitary sewer is permitted under certain conditions as indicated in 10 CFR.

(2) Incineration of licensed material is permitted, provided that NRC regulations and other applicable State and local requirements are met.

(3) Shipments of radioactive waste to a licensed land disposal facility must be accompanied by a manifest.

(4) Records of surveys, radiation monitoring, and disposal of licensed radioactive materials will be maintained on site. Notification of appropriate authorities is required when exposure or release of radioactive material occurs.

c. Facilities must be aware of and adhere to DOT requirements relevant to the transport of hazardous, radioactive, and/or regulated medical waste materials.

14.08 SPECIAL WASTE

a. Wastes which cannot be classified as one of the three previous categories are defined as special waste; they cannot be listed as general waste as they have properties which pose special challenges for generators, transporters, and disposers.

NOTE: *It is anticipated that the definition of special wastes will change significantly over time.*

b. Examples of special wastes are not limited to:

(1) **Regulated Medical Waste.** Regulated medical waste, also referred to as potentially infectious waste, includes any waste material or article which harbors, or may reasonably be considered to harbor, pathogens which might be expected to produce disease in healthy individuals.

(a) A facility policy will be established defining and identifying regulated medical wastes, their source, and disposal procedures.

(b) The facility policy must take into consideration the currently accepted definitions of regulated medical wastes and their relative hazard to employees, beneficiaries, and the general public.

(c) The accepted definition must be applied with prudence; consideration must be given to cost, system capability, physical plant condition, and availability of local disposal options.

(d) Operating procedures must be established and implemented to provide involved employees with proper training, equipment, and backup.

(2) **Other Regulated Waste**

(a) **Toxics.** Certain waste compounds may, if mismanaged, present potential risk to the environment or to human health. These wastes are not presently identified as regulated hazardous waste; however, they may

become regulated in the future as environmental legislation becomes more inclusive. The following precautions are to be noted:

1. Containment, recovery, and recycling procedures must be examined to identify commonly used toxics, e.g., unlisted cytotoxics, antibiotics, antimicrobials, anti-viral agents, unlisted solvents, etc. prior to ultimate disposal.
 2. Alternate products, technologies, and methods to reduce or eliminate the utilization of materials that generate toxic wastes, shall be evaluated and adopted where possible. Such evaluation must be documented.
- (b) **Spent Oils.** Waste oils may contain high concentrations of heavy metals and other listed pollutants. Improper disposal of oil is subject to soil and water pollution oversight monitoring.
- (c) **Pesticides.** All pesticides regulated by the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) or the Food and Drug Administration (FDA) require safe utilization and disposal.
- (d) **Fertilizers and/or Salts.** Improperly used or stored products such as fertilizers and/or salts may cause environmental harm and represent poor cost containment practices.
- (e) **Asbestos.** The management of asbestos is regulated by the United States Environmental Protection Agency (USEPA), the Occupational Safety and Health Administration (OSHA), individual states, and VA. As a waste, asbestos requires special handling to ensure that fibers are not released to the atmosphere.
- (f) **Sharps.** These items must receive special handling because of their potential to transmit diseases or harmful substances, but also because they may present hazards that may contribute to physical injury.
 1. Sharps include, but are not limited to the following:
 - a. Unused hypodermic needles, puncture devices, syringes, suture needles, scalpel blades, pipettes, slides, cover slips, vials, tubes;
 - b. Cutting, digging, or abrasion tools; knives, razors, blades; and
 - c. Glassware, metals, splinters, etc.
 2. After use, sharps must be placed directly into special containers that eliminate the possibility of contact during subsequent handling, treatment, and disposal.
 3. Contaminated sharps must be collected and disposed of in accordance with the requirements established for regulated medical waste; if sharps are not incinerated they must be decontaminated and rendered unusable before disposal.

14.09 WASTE MINIMIZATION STRATEGIES

- a. This process includes:
 - (1) Change, substitution, or replacement of the kinds of products used;
 - (2) Reduction of the amounts of wastes generated; and
 - (3) Recycling of waste components.

NOTE: *While these options are generally associated with hazardous wastes, the strategies of product substitution, recycling, and reuse of products also provides pollution prevention opportunities for regulated and non-regulated products.*

- b. A function of the WMC, or responsible official, is to examine waste minimization techniques through:
 - (1) Product change.

- (2) Source reduction as:
 - (a) Input material change,
 - (b) Technology change, and
 - (c) Good operating practice.
- (3) Recycling (on-site and off-site) as:
 - (a) Use and reuse, and
 - (b) Reclamation.

14.10 STANDARD OPERATING PROCEDURES

a. Effective waste management operation. The Chairperson, WMC, or program official, will coordinate and organize the working relationships. The WMC, or program official, will be responsible for:

- (1) Reviewing the existing facility-wide program,
- (2) Identifying liabilities,
- (3) Examining opportunities for improvement, and
- (4) Documenting findings and recommendations for top management review and approval.

b. The Chairperson, WMC, or program official, shall maintain reference materials to provide information on all phases of waste management, and should reference H-10-90-1, Handbook for the Development of a VA Health Care Facility Waste Management Plan, as a program guidance document.

14.11 GENERATION AND IDENTIFICATION

Waste containers, identifying labels, and signage will meet applicable safety codes and regulatory requirements, and be designed to be consistent with the objectives of other program elements, e.g., environmental sanitation, pest management, interior design operations, etc.

a. Identification and separation of wastes must be performed as close to the work site as possible, i.e., by the individual(s) using and discarding the material(s). These persons are most familiar with the waste and are essential to the process of waste segregation.

- (1) All hazardous materials must be identified as to potential waste type prior to purchase, release, or use.
- (2) A current hazardous materials audit must identify these products, their location and use.
- (3) Material Safety Data Sheets (MSDS) must be readily available for employee use to assist in the waste management process.

b. Containers used for transport must be marked or tagged in accordance with regulations to indicate the type of waste and the in-house destination.

- (1) Information sensitive waste must be managed in a secure manner.
- (2) Sensitive data, such as patient, employee, beneficiary information, etc., should not be identified in a manner which will attract attention.

c. A waste stream identification system will be developed locally to accommodate the variety of wastes generated throughout the facility. The proper segregation of regulated and general wastes, chemically incompatible wastes, toxics, recyclables, etc. must be specified.

14.12 COLLECTION

Waste collection services will be routinely provided to reduce the potential for insect and vermin harborage, microorganism growth, odor generation, and for safety, security, and aesthetic considerations.

a. Service will be provided throughout the facility; the established frequency of collection is dependent on local needs.

b. Removal will be performed systematically; there must be a demonstrated connection of the collection, routing, and transport schemes for the storage and disposal locations, e.g., waste stream flow process is important; patient care waste must not be permitted to accumulate in patient care areas. Hazardous or sensitive materials must not be left unattended and/or unsecured.

c. Waste that is not identified in accordance with local policy will not be removed until properly identified.

14.13 HANDLING

Proper handling of wastes is important for worker safety and cost containment. Training, to insure that established policies and procedures for the management of health care generated wastes are disseminated, will be conducted for all involved employees.

a. Appropriate personal protective equipment will be provided, and worn, when handling medical care wastes.

b. Bags of waste must be sealed before being removed from the area of collection. Good bag handling technique should ensure the prevention of injury.

c. Personnel from using units will ensure that patients' personal wearing apparel, surgical instruments, textiles, and other reprocessable items are separated from waste.

d. The special handling of bags, boxes, or other containers of hazardous or radioactive wastes must be stressed. Glass fragments and needles will be placed in puncture resistant containers before removing them from the work area.

e. Needles pose the single greatest risk of injury and potential for transmission of disease to waste management employees. Special care must be directed at the proper containment, collection, and transport of these sharps. Good waste handling techniques must be emphasized.

14.14 CONTAINMENT

Containers will be selected to meet the specific requirements of waste stream collection. Liners must be provided to speed collection and reduce intensive cleaning.

a. Waste liners (bags) will be tightly closed prior to transport at the point of collection.

b. Liners should be placed inside all containers. When required they must be clearly identifiable.

c. Waste must be placed in flame-resistant containers having impervious liners.

d. Containers for the removal of sharps must be clearly identified, rigid, impervious, and be puncture resistant.

- e. Regulated medical waste or controlled waste must be contained and sealed in impervious liners, which are color coded and/or clearly identified in some manner (such as the universal alert symbols, and/or other appropriate cautionary statement).
- f. Data sensitive waste must be contained and sealed prior to transport at the collection site.
- g. Reusable waste containers must be routinely sanitized with a disinfectant and/or detergent approved for hospital use, as an integral part of the collection process.

14.15 TRANSPORT

Handling, transfer, and transportation systems will be established and maintained in such a manner that the integrity of the packaging is not compromised.

- a. All waste carts are to be clearly labeled, indicating waste contents, (unless precluded by security considerations) and must be delivered directly to the designated waste holding area.
- b. Regulated, controlled, and certain data sensitive wastes will be transported in secure containers, and remain under the direct control of a responsible individual(s) until placed in a designated waste holding area(s).
- c. Transport to a dumpster, storage area, compactor, incinerator, shredder, etc., will normally be accomplished via a closed system, e.g., closed carts, chutes, etc.
- d. Trash chutes, carts, and other transport containers must be sanitized on a routine basis, with a disinfectant and/or detergent approved for hospital use.

14.16 STORAGE

Areas used to hold waste, pending further disposition, will be provided with lockable doors, water resistant surfaces, hot and cold water supply, floor drain(s) to facilitate routine cleaning, and negative air pressure.

- a. Waste management holding, storage, and treatment areas will include, but not be limited to, the following security measures:
 - (1) All waste collection and storage areas will be provided with self-closing, internal release locks, and secured unless attended. Access will be strictly controlled.
 - (2) Areas will be appropriately identified with placarding, signage, and/or universal alert symbols.
- b. A routine decontamination and maintenance program must be established for all storage areas.

14.17 REDUCTION

The major goal of waste management is to decrease the volume of waste at the point of generation.

- a. Reusable items, such as linens, pads, restraints, etc., must be returned for reprocessing. Reusables may be identified for discard only by a designee of the appropriate fund control official.
- b. Products, chemicals, drugs, substances, etc., which have residual or recoverable value must be considered for recycling collection and redemption. Systems for collection, containment, and sale of such recycled goods must be established when these alternatives to discard are adopted.
- c. During the product selection process, the cost of disposal must be included to determine true life-cycle costs.

14.18 TREATMENT

a. Wastes which are determined to represent a hazard to the general public, shall be rendered innocuous prior to removal from the custodial care of the health care facility, if possible. NOTE: Required treatment permits must be obtained.

b. Treatments include, but are not limited to:

(1) **Biologicals.** Treatment is steam, dry heat, and/or chemical inactivation.

(2) **Hazardous chemicals.** Treatment is chemical neutralization.

(3) **Sharps.** Treatment is steam, dry heat, and/or chemical disinfection, prior to mechanical destruction or encapsulation.

(4) **Drugs.** The treatment is incineration.

14.19 DISPOSAL

Shop, warehouse, pharmacy, laboratory, data center, and other areas, will be required to containerize specific waste(s). Disposal services will be coordinated by the Chairperson, WMC, program official, or designee.

a. Disposal of non-hazardous and/or non-controlled waste will meet with applicable Federal, state, and local environmental and health regulations.

b. Sharps will be placed in appropriately identified puncture resistant containers prior to disposal.

c. Regulated, or sensitive waste will be identified, adequately contained, and controlled during the disposal process.

14.20 SECURITY OF SENSITIVE DATA

The term "sensitive data" refers to data that require protection from inadvertent or deliberate disclosure, alteration, or destruction. Waste which contains such data must receive special handling to ensure its protection until appropriate disposal.

a. The systematic containment and collection of identified sensitive data must be defined in local policy.

b. Procedures must be developed to provide for adequate security during the collection, transport, storage, or disposal of sensitive data.

c. Methods utilized for destruction and/or disposal must meet current policy requirements while incorporating the most cost/effective methods.

14.21 TRAINING, EDUCATION, AND CERTIFICATION

A planned, documented training program will be established and maintained to provide employees with accurate and timely instruction concerning the facility Waste Management Program. It must detail the waste management staff assignments, functions, and scope of authority and responsibility.

a. All employees will receive introductory training concerning the facility Waste Management Program. Training must include the following:

(1) Waste identification systems;

(2) Potential hazards; and

(3) Identification of responsible program officials.

b. Employees assigned responsibilities for identifying, cleaning, collecting, transporting, or disposing of regulated or hazardous wastes will receive special training. Training must be provided before the employee comes in contact with these specified wastes; it must be routinely augmented and updated to ensure comprehension. This training must include the following:

(1) Selection and use of protective clothing and equipment;

(2) Emergency spill response; and

(3) Contingency planning.

c. Employee training must be documented. Documentation must include:

(1) Description and duration of instruction;

(2) Date(s) of training, and

(3) Instructor's name and title.

d. Employees involved in regulated or hazardous waste management must be encouraged to pursue individual education initiatives to improve job knowledge and skills.

e. Employee attendance at recognized waste management education and related certification programs will be encouraged.

14.22 RECORDS MAINTENANCE

Documentation of waste management actions, both actual and planned, are essential to a well managed program.

a. Minutes of the WMC, generated recommendations, and actions taken must be documented.

b. Operational records of incineration, contracted services, quality assurance audits, employee assignments, external reviews, etc., will be documented and maintained.

c. Required reports must be completed and submitted in timely fashion; copies will be maintained for a minimum of 3 years.

14.23 CONTINGENCY AND EMERGENCY PLANNING

Alternative plans shall be developed for regulated or hazardous waste collection, transport, storage, and disposal. Sharing agreements, contingency contracts, etc. require option development and documentation.

a. VA healthcare facility waste management concerns must be reflected in internal and external disaster planning.

b. Sharing agreements to provide options for the management of health care waste must be explored and documentation maintained.

14.24 QUALITY ASSURANCE

An effective Waste Management Program will include documented, ongoing quality assurance provisions. The program will meet current regulatory and accreditation requirements and standards. The quality of all elements of the program (see par. 14.02), will be annually certified by the responsible Waste Management Officer to the facility Director.