

**Self-Assessment Manual
for the
Proper Management
of
Medical Waste**

Prepared by

**The Self-Assessment Project Partnership
between the
California Department of Health Services
and the
California Healthcare Association**



**November 1, 2010
Third Edition**

Acknowledgements

This manual was originally developed through a partnership agreement between the Environmental Management Branch of the California Department of Health Services and the California Healthcare Association

State of California, Department of Public Health

Glenn Takeoka, Chief
Environmental Management Branch
Alison F. Dabney, Chief
Medical Waste Management Program

California Healthcare Association
Roger Richter
Senior Vice President, Professional Services

The Department of Public Health and CHA would like to acknowledge the contribution of the following facilities in the creation of this *Self-Assessment Manual for the Proper Management of Medical Waste*

Emmanuel Medical Center, Turlock
Mark Twain St. Joseph's Hospital, San Andreas
Mercy General Hospital, Sacramento
Mercy San Juan Hospital, Carmichael
Sutter Davis Hospital, Davis
U.C. Davis Medical Center, Sacramento

If you have any questions regarding
medical waste management
please call:

**Department of Public Health
Medical Waste Management Program
(916) 449-5671 (Northern California)
(818) 551-2042 (Southern California)**

Table of Contents

	Page
Introduction	1
The Self-Assessment Project	1
Project Mission Statement.....	1
Medical Waste	2
Scope and Purpose of this Manual.....	3
A Systems Approach for Managing Medical Waste	3
Medical Waste Self-Assessment for Quality Improvement.....	4
Making it Easy to Comply with Medical Waste Requirements.....	4
Chapter 1	
Developing a Workable Medical Waste Management Plan	6
Step One: Understanding the Medical Waste Management Act	6
Step Two: Understanding the Waste Handling System at the Facility..	6
Step Three: Designing the Plan for the Needs of the Facility	7
Step Four: Following the CDPH Guidance	7
Step Five: Developing Training to Communicate the Plan	7
Step Six: Evaluating the Effectiveness of the Plan.....	7
Medical Waste Management Plan Checklist	8
<i>Sample</i> Medical Waste Management Plan.....	12
Medical Waste Storage Methods.....	13
Medical Waste Treatment and Disposal Method.....	14
Emergency Action Plan	14
Chapter 2	
Medical Waste Minimization	15
Recognizing the Need to Reduce Wastes.....	15
Waste Minimization Planning	15
Waste Minimization Assessment.....	16
Medical Waste Minimization Implementation	16
Chapter 3	
Bloodborne Pathogen Standard	17
Definitions Pertinent to Waste Management	17
Chapter 4	
Use of the Self-Assessment Tool for Medical Waste Management...	18
Part I–Waste Management Summary	18
Part II–Consolidation and Transport.....	18
Part III–Treatment/Sterilization of Medical Waste	18
Part IV–Room/Area of Waste Generation	18
Part V–Utility Room/Intermediate Storage.....	18
Part VI–Pick-Up/Transport to Loading Dock for Removal/Treatment.	18
Self-Assessment Tool.....	19
Appendices	28
A–Preventing the Most Frequently Found Medical Waste Violations.	29
B–Glossary	31

INTRODUCTION

This manual was developed through a partnership between the Environmental Management Branch (EMB) of the California Department of Health Services (DHS) and the California Healthcare Association (CHA). Partnering is recognized as a process where organizations with a shared vision, or common interest, work together to achieve a desired outcome. Staff from EMB's Medical Waste Management Program and five member health care organizations within CHA recognized that they had a shared vision of properly handling medical waste. Through adoption of the paradigm of collaboration, they decided to jointly develop a self-assessment inspection program for properly handling the medical waste stream. The synergy created through the self-assessment project has allowed the participants to develop strategies to more efficiently manage medical waste than if these parties worked on this issue separately.

The self-assessment project developed a refreshing new way of governmental regulation of medical waste management practices at health care facilities. The April 23, 1992 findings of the bipartisan Council on California Competitiveness indicated there was a widespread lack of faith in public institutions and a strong conviction that government was no longer working. The Council found "... a picture of a government frozen, without the vision or will to formulate policies or carry out long-range plans for the benefit of all people."¹ The Council recommended several changes in the way government operates in California. They found a need for partnership, customer service training, quality management processes, and global thinking to produce a sound economy. Additionally, they recommended a new design for the governance of California, a customer-service attitude in every government employee, and a Total Quality Management program in every state and local agency to constantly improve efficiency.²

The Self-Assessment Project

The DHS/CHA partnership for developing this self-assessment medical waste management project was an attempt to successfully implement the recommendations and desires of the Council for a new strategy for an environmental health regulatory program. It was based on the realization that government agencies no longer need to operate in a strict "command and control" strategy. Further, regulatory agencies do not need to be totally responsible for the entire process that is required to achieve proper handling of medical waste; but can rely on the regulated community as a partner in these efforts. This project was based on the philosophy that partnering between regulatory agencies and the regulated community holds promise for improving compliance, while reducing reliance on the traditional regulatory control process.

¹ Council on California Competitiveness, *California's Jobs and Future*, April 23, 1992, page 3.

² *Ibid.*, pp. 6-7.

The following Mission Statement was developed by the project participants at their first meeting:

Project Mission Statement

“To develop and implement a self-auditing partnership for effective management of medical waste between the California Department of Health Services and large quantity generators operating under hospital licensing. Effective management is the proper legal, public and environmental protection, and cost control.”³

The term “self-audit” was later changed to “self-assessment.” Although the project was designed for large quantity generators operating under hospital licensing, the findings and many applications from this manual will work in all facilities generating medical waste. At the heart of the project was the desire to develop a self-assessment tool that would allow medical waste generators to internally assess the handling of their medical waste stream. This required the self-assessment tool be designed to evaluate the critical factors in the waste management system. The self-assessment process was based on the premise that assessment results would be open to review by the regulatory agency. Further, if significant or major violations were discovered through the self-assessments; the generator would have a “safe harbor” for reporting them to the regulatory agency. The “safe harbor” concept allows the health care facility to report violations found without being found out of compliance by the regulatory agency. Through consultation and collaboration between the regulatory agency and the generator, the best means for quickly solving the problem would be jointly developed. This approach moves the regulatory agency away from a strict enforcement program and into one of education and consultation to achieve compliance with the medical waste management laws. In its January 26, 1996 edition, the *Los Angeles Daily Journal* described this self-assessment project as the “Most Promising New Program for 1996.”⁴ To be successful, the project participants realized that there must be a strong training component to guide implementation of the self-assessment program.

Medical Waste

The Medical Waste Management Act provides the definition of medical waste (California Health and Safety Code, § 117690). The waste must satisfy three criteria in order to be classified as medical waste. These three criteria are:

1. The material must be a waste product. This precludes materials that have intrinsic value (such as outdated pharmaceuticals that are returned for credit) from being classified as a medical waste. On the other hand, outdated pharmaceuticals sent for treatment, as waste would be classified as medical waste.

³ Taken from the notes of the January 8, 1996 meeting of the *Medical Waste Self-Assessment Project*.

⁴ Hsiao, Peter, “Prize Policies—Evaluating Environmental Amnesty Programs,” *Los Angeles Daily Journal*, January 26, 1996.

2. The waste must be either biohazardous or sharps waste. Various forms of waste are defined as biohazardous because of the actual or presumed presence of pathogenic microorganisms. Such wastes as laboratory waste and fluid blood fall into this category and are therefore biohazardous waste. Objects which have been used in invasive procedures, such as hypodermic needles, and broken glass items contaminated with blood or other biohazardous waste are considered to be sharps waste.
3. The waste must be produced as a result of a specified action in the delivery of health care. The Medical Waste Management Act (section 117690) defines this as the "...diagnosis, treatment, or immunization of human beings or animals." Some actions such as medical research, production or testing of biologicals, accumulation of home-generated sharps waste and the removal of trauma scene waste are specifically included in the definition of medical waste.

Scope and Purpose of this Manual

The primary purpose of this manual is to assist health care facilities in complying with requirements of the Medical Waste Management Act (MWMA or Act) by providing instruction on the use of a self-assessment tool to help ensure that medical wastes are properly handled, safely stored and adequately treated on-site or sent for off-site treatment at an approved facility. Although the scope of the manual addresses this purpose, it also goes further by providing information about waste minimization, sound waste handling practices and continuous quality improvement (CQI). It is hoped that this manual will provide the cornerstone for the training that will be needed by staff at facilities implementing the self-assessment program. It was intended that the manual would also serve to create uniformity of interpretation within the regulatory community of acceptable practices necessary to fulfill requirements of the MWMA. The manual can also serve as a reference document to assist facilities in complying with the Act.

An additional objective of this manual is to assist CQI projects within the health care community. This manual can be used as a reference document for CQI teams working on medical and solid waste source reduction, needle-stick injury prevention, medical waste management plan updating, infection control, and other improvement projects.

A Systems Approach for Managing Medical Waste

A systems approach, as emphasized throughout this manual, will result in cost-effective medical waste management. Operations within organizations are composed of systems and subsystems working to produce outcomes that fulfill the aim of each system. To achieve desired outcomes, the systems must be working together and not against each other. Although this sounds very straightforward, it is surprising how many systems are not aligned and actually are competing with each other within the organization. The late quality guru, W. Edwards Deming, indicated that we must optimize the operations of the interdependent components within an organization to accomplish the aim of the system.⁵ To ensure that medical waste is handled,

⁵ Deming, Edward, *The New Economics for Industry, Government, & Education*, Massachusetts Institute of Technology, 1993, page 98.

containerized, and stored properly, the environmental services staff within a health care facility must work with the doctors, nurses, laboratory staff, and others that generate medical waste in patient care. Input must also be provided to those that negotiate contracts for the facility to obtain services to haul away untreated medical waste for off-site treatment. Although this is not an exhaustive list of all that is involved with medical waste, it does indicate that the medical waste handling system interfaces and interacts with a number of systems within the facility.

All of these systems must work together for the good of the organization, which in this case, is the proper handling, storage, transportation, and treatment of medical waste. When this is accomplished, it will not only ensure compliance with the laws governing medical waste, but will also lead to community and worker protection.

Medical Waste Self-Assessment for Quality Improvement

Participation in the medical waste self-assessment program can serve as a positive step towards active review of the medical waste management system. Once the system is understood and its operation is predictable, strategies for improvement can be initiated. It is often helpful to determine the monthly volume of medical waste being generated. The processes and steps that the medical waste goes through from the point of generation will need to be flow-charted to understand how and where the waste is handled and stored. An assessment should be completed of reported injuries that have occurred along the path the medical waste has traveled from its point of generation. Incidents of medical waste being erroneously placed in the solid waste stream should be tabulated by location where the violation occurred. An analysis of the cost of treating medical waste on-site versus having it hauled away for treatment should be undertaken. The information from these studies can be used to determine areas where process improvement projects should be initiated.

Management should strive to have CQI projects working continuously to improve the medical waste handling system in order to achieve cost efficiency, worker safety, and lastly, public and environmental health protection.

Making it Easy to Comply with Medical Waste Requirements

Compliance with the Act is the responsibility of the generator of the waste. This manual is not the Act or a replacement for it. Compliance with the Act will result from proper practices being implemented on a daily basis by staff within the health care facility. Routine use of the self-assessment tool provides the health care facility with an evaluation of how their medical waste operations are functioning and allows for self-discovery and correction of violations before they are found through a routine medical waste inspection by the local enforcement agency. If this manual is to become a value-added resource, the health care facility must provide staff training in its use and refer to it regularly. Success will also depend on staff retention of the basic information provided by the manual, so periodic refresher training may be required.

This manual presents comprehensive coverage of the Act and common acceptable practices to meet its requirements. The self-assessment tool allows for an evaluation of the medical waste handling and treatment systems throughout the entire facility. A strategy and step-by-step process for developing a medical waste management plan are discussed in the manual. Avoiding bloodborne pathogen exposure is also

covered in the manual. Waste prevention and minimization techniques are reviewed in an effort to improve medical waste handling systems within health care facilities. All of this information should make it easier for generators of medical waste to comply in a cost-effective manner with the MWMAAct.

This manual was designed for use by many different classifications of workers within health care facilities who are involved with generating, handling, storing, or treating medical wastes as well as managers and staff that provide oversight or support to these operations. The major target audience for the manual is individuals responsible for oversight of the medical waste stream. This responsibility may reside with engineering staff, housekeeping, or the environmental health and safety unit. The group in charge of medical waste management should be the first to become familiar with this manual, so that they can oversee implementation of the self-assessment tool throughout the health care facility. In some cases, they may become the trainers in how to use the self-assessment tool and the information provided in this manual. Use of the manual should not be limited to the front line staff. It can also serve as a reference manual or resource to management, infection control staff and CQI teams working on waste management projects.

CHAPTER 1

Developing a Workable Medical Waste Management Plan

A comprehensive Medical Waste Management Plan (Plan) is the key ingredient to successfully guiding the proper handling of medical waste within a health care facility. However, a plan that is not understood or followed is of little value to the institution. Training staff to ensure they are familiar with and understand the plan is critical to ensure successful implementation of the plan and proper handling of medical waste. This chapter will assist the reader in developing a workable Plan.

Step One: Understanding the Medical Waste Management Act

A Plan must have as its first priority, compliance with the laws governing medical waste. An understanding of the MWMA is an essential first step for those tasked with drafting the Plan. The Act is conveniently divided into the following chapters for ease of use:

Chapter 1.	General Provisions
Chapter 2.	Definitions
Chapter 3.	Powers and Duties
Chapter 4.	Small Quantity Generator Requirements
Chapter 5.	Large Quantity Generator Requirements
Chapter 6.	Medical Waste Haulers
Chapter 7.	Medical Waste Treatment Facility Permits
Chapter 8.	Treatment
Chapter 9.	Containment and Storage
Chapter 10.	Enforcement
Chapter 11.	Suspension or Revocation

Frequent referral to the Act may be necessary by those writing the plan to ensure the Plan is consistent with the Act. Particular attention should be paid to Chapters 2, 5, and 9 for health care facilities that have their waste hauled to an off-site treatment facility. Those facilities that treat a portion of their waste on-site will need to follow the requirements of Chapter 8. Although Chapter 6 focuses on requirements for commercial medical waste haulers, facilities that have Limited Quantity Hauling Exemptions for hauling medical waste should read the pertinent sections of this chapter dealing with such exemptions.

Step Two: Understanding the Current Waste Handling System at the Facility

Prior to writing or revising the Plan, the medical waste system must be thoroughly understood. The following critical factors must be known:

- where the waste is generated;
- what types of medical waste are generated;
- how it is containerized;
- how it is transported through the facility;
- where it is stored prior to transport or on-site treatment; and
- if applicable, how it is treated on-site.

Once the flow of medical waste through the facility is understood, handling practices for the waste stream should be evaluated against the requirements of the Act. This review will help to ensure that compliance with the legal requirements of the Act is met for the various components of the medical waste stream, including the points of generation, storage, handling, transportation, and treatment. An evaluation of the current recordkeeping process should also be undertaken to ensure that adequate documentation, as required by the Act, is in compliance.

A final evaluation of the current waste handling system should be conducted from the perspective of meeting with the needs of the organization, including any corporate mandates for how medical waste shall be handled and treated. The following are subjects that should be considered for evaluation:

- the cost effectiveness of the current handling practices;
- whether the system is meeting the corporate image regarding environmental issues such as waste reduction, recycling, and final disposition of the treated wastes.

Step Three: Designing the Plan for the Needs of the Facility

The Plan must be able to meet the existing and future needs of the health care facility. Care must be taken during the design phase of the planning process to ensure that the plan is capable of handling the current waste stream as defined through steps one and two. The medical waste management system must have sufficient capacity to handle the varied components of the waste stream. If on-site treatment is provided, the plan must have contingency plans for handling waste during emergency conditions. The management plan will become the operational guidance document for the facility.

Step Four: Following the Department of Public Health's Plan Guidance

CDPH's Medical Waste Management Program has developed a checklist to guide those who are writing a medical waste management plan. The checklist appears at the end of this chapter for your use and may prove helpful in the preparation of a complete medical waste management plan.

Step Five: Developing Training to Communicate the Plan

Once Plan has been developed and adopted by the administration of the health care facility, it must be communicated to the employees that are impacted by it. A comprehensive training strategy that includes several types of training techniques may be the most effective way of communicating the Plan to all staff within the health care facility.

Step Six: Evaluating the Effectiveness of the Plan

The Plan should be periodically updated to reflect improvements made in the handling of the medical waste stream within the health care facility. Staff should be encouraged and even challenged to evaluate the effectiveness of the plan. This should become a topic for periodic review by the teams working on continuous improvement within the organization.

Medical Waste Management Plan Checklist

Date: _____

Facility Name: _____

Address: _____

City: _____

Responsible Party: _____ Phone: _____

This facility has been identified as: (check one)

___ This generator of medical waste did not have a Plan on file with the Department. Below are the items to be incorporated in the Plan. Use this checklist and the Act in drafting a Plan for this facility. If you do not have a copy of the Act, contact the Department and one will be provided.

___ A review of this facility's Plan revealed that it did not adequately address the items checked below. The items checked below are the areas which need to be revised. Use this checklist and Act in revising the facility's Plan. If you do not have a copy of the MWMA, contact the Department and one will be provided.

The following are highly recommended or required elements of a compliant medical waste management plan.

___ Provide the name of the contact person at the facility for matters regarding medical waste. § 117960(a).

___ Provide the name, phone number, and address of the facility. § 117960(b).

___ Indicate the type of facility. § 117960 (c).

___ Indicate the types and estimated average monthly quantity, of medical waste generated. § 117960(d).
§§ 117635 and 117755 of the MWMA for types of medical waste.

___ Indicate the on-site medical waste treatment method utilized if applicable. § 117960(e).

___ The name of the registered hazardous waste hauler utilized to have untreated medical waste removed for treatment, if applicable. §§ 117960(f)(g).

___ The name of the off-site treatment facility to which the medical waste is being hauled. § 117960(h).

___ Provide an emergency action plan. Indicate in the emergency action plan the actions to be taken in the event of a disruption of service as the result of a natural disaster or an equipment failure. § 117960.

___ Provide a statement certifying that the information provided is complete and correct. § 117960.

___ Indicate that tracking documents and treatment records will be maintained for 3 years. § 117975.

Procedures for the processing, storage, transport, and treatment of pathology wastes (recognizable human anatomical remains), trace contaminated tissues, and chemotherapeutic containers, and mixed waste.

___ Indicate how recognizable human anatomical remains are to be handled or treated to ensure compliance with § 118220 of the MWMA. Describe the procedures to be used in their handling. If no recognizable anatomical remains are generated, indicate this fact in the Plan.

___ Indicate how mixed waste as specified in § 117730 of the MWMA is to be handled. State the procedures to be used to assure proper handling. If there is no mixed waste produced by this facility, indicate this fact in the Plan.

___ Indicate how pathology and chemotherapeutic wastes are handled and treated. The plan must contain the definition of “empty,” as specified in § 117635 of the MWMA to assure that pathology and chemotherapeutic wastes are properly handled. Describe the procedures to be employed to assure proper handling. If these wastes are not generated by this facility, indicate this fact in the Plan.

Containment and Storage

___ Indicate that medical waste will be contained separately from other waste at the point of generation. §118275(a).

___ Indicate that medical waste shall be placed in a red biohazard bag. §§ 118275 (b) and 117630.

___ Indicate that sharps waste must be contained in a sharps container. §§ 118275 (c), 117750, and 117755.

___ Indicate handling procedures for pathology, trace chemotherapeutic, and mixed waste. § 118275(d).

___ Indicate that red biohazard bags are to be tied. § 118280 (a).

___ Indicate that red biohazard bags are to be placed for storage, handling, and transport in rigid containers with tight-fitting lids labeled with the words “Biohazardous Waste,” or the word “Biohazard,” and the international biohazard symbol on the lids and sides so as to be visible from any lateral direction. §§ 118280 (b) and 117645.

___ Indicate that the maximum storage time of medical waste above 32 degrees Fahrenheit is seven (7) days. If stored at or below 32° F, please state this fact

in the Plan and describe the storage temperature monitoring schedule (maximum storage time at or below 32° F is 90 days).
§ 118280 (d) (1) 7 days and (2) 30 days (< 20 lbs./month generated).

- ___ Provide the procedures to containerize sharps waste. § 118285 (a) - (d).
- ___ Provide the protocol for routine washing and decontamination of reusable rigid medical waste containers (see Section 118295 (a) (b) for approved methods, disinfectants, and use). § 118295.
- ___ Provide techniques performed and disinfectants to be utilized in the cleanup of medical waste spills. Provide the type(s) of disinfectant, concentration and contact time used for the decontamination of spills. §118295 (b) for approved disinfectants and use..
- ___ Indicate that the accumulation area used by the facility to store containers of medical waste for accumulation must be secured so as to prevent or deny access by unauthorized persons. Warning signs must be posted on or adjacent to, the exterior of the entry doors, on entry doors, gates, or lids. These warning signs must be in both English and Spanish as follows: “CAUTION—BIOHAZARDOUS WASTE STORAGE AREA—UNAUTHORIZED PERSONS KEEP OUT” and in Spanish, “CUIDADO—ZONA DE RESIDUOS — BIOLÓGICOS PELIGROSO—PROHIBIDA LA ENTRADA A PERSONAS NO AUTORIZADAS,” or in another language in addition to English, determined to be more appropriate. § 118310.

Limited Quantity Hauling Exemption

- ___ Indicate if off-site medical waste is transported to this facility for consolidation and/or treatment. If so, indicate the sources and the protocols in place for accepting the waste. § 118030.

Treatment

Discharge to Public Sewer System

- ___ Describe any medical waste to be treated by means of discharge to the public sewer system. Describe in detail the methods to be used and the types of medical waste to be treated in this manner. § 118215 (b).

Facilities which do not treat medical waste on-site are not responsible for the information below.

Steam Sterilization

- ___ Provide standard written operating procedures for biological indicators, or for other indicators of adequate sterilization approved by the Department, for

each steam sterilizer, including time, temperature, pressure, type of waste, type of container, closure on container, pattern of loading, water content, and maximum load quantity. § 118215 (c) (1).

- ___ Provide procedures established for checking recording or indicating thermometers during each complete cycle to ensure the attainment of 121 degrees Centigrade (250° F) for at least one-half hour, depending on the quantity and density of the load, in order to achieve sterilization of the entire load. §§118165 and 118215 (c)(2).
- ___ Indicate that for each treatment cycle the amount and types of medical waste treated shall be recorded and maintained as part of the treatment records. §§ 118155 (f).
- ___ Indicate that thermometers shall be checked for calibration annually and that records of the calibration checks shall be maintained as part of the facility's files and records for a period of three years, or for the period specified in the regulations. § 118215 (c)(3).
- ___ Indicate that heat-sensitive tape, or another method acceptable to the enforcement agency, shall be used on one autoclave bag per cycle that is processed on-site to indicate attainment of adequate sterilization conditions. Section 118215 (c)(3) of the MWMA.
- ___ State the course of action to be taken in the event that the heat-sensitive tape has not changed color and or the thermometer indicates that proper sterilization has not taken place. § 118215 (c)(1).
- ___ Indicate that biological indicator *Geobacillus stearothermophilus*, or other indicator of adequate sterilization as approved by the Department, shall be placed at the center of a load processed under standard operating conditions at least monthly to confirm the attainment of adequate sterilization conditions. § 118215(c)(4).
- ___ State that all records pertaining to on-site treatment shall be maintained for a period of not less than three years. §§ 117975, 118165 (b), and 118215 (c)(5).

Sample Medical Waste Management Plan

Facility: Acme Hospital
1234 Main Street
Small Town, CA 12345
(555) 123-4567

Person Responsible for Implementation of Plan: _____
Title: _____

Types of Medical Waste Generated:

BLOOD OR BODILY FLUIDS – Liquid blood elements or other regulated bodily fluids, or articles contaminated with blood or bodily fluids.

SHARPS – Syringes, needles, blades, broken glass.

ISOLATION WASTE – Waste contaminated with excretion, exudate, or secretions from humans who are isolated due to highly communicable diseases.

CHEMOTHERAPEUTIC WASTE – Trace amounts of chemotherapeutic waste.

PATHOLOGY WASTE – includes biopsy materials, and all human tissues and anatomical parts that emanate from surgical, obstetrical, autopsy and laboratory procedures.

ACME HOSPITAL IS REGISTERED AS A LARGE QUANTITY GENERATOR. THE ESTIMATED MONTHLY VOLUME OF MEDICAL WASTE GENERATED IS 7000 POUNDS. ACME HOSPITAL DOES NOT TREAT ANY MEDICAL WASTE ON-SITE. ALL WASTE IS REMOVED BY A REGISTERED MEDICAL WASTE HAULER AND TREATED AT AN APPROVED OFF-SITE TREATMENT FACILITY.

Medical Waste Segregation, Containment, Labeling, and Collection

Procedures:

Medical waste is contained separately from other wastes at the point of generation. In non-patient care areas, solid waste is not to be disposed of in medical waste containers. When cleaning patient care areas, Environmental Services will place all medical wastes into RED biohazard bags labeled with the words, "Biohazardous Waste" or labeled with international biohazard symbol and the word "Biohazard." These bags are to be impervious to moisture and have a strength sufficient to preclude ripping, tearing, or bursting under normal use and handling. The biohazard bag used must be constructed of material that will pass the 165 gram dropped dart impact resistance test as required by Standard D 170985 of the A.S.T.M. All waste placed in a red bag is considered to be medical waste. The bags will be tied to prevent spillage down. All sharps waste will be placed in a sharps waste container labeled with the words "SHARPS WASTE" or with the international biohazard symbol and the word "Biohazard." Sharps containers will be rigid, puncture-proof containers that when sealed are leak resistant and not able to be

reopened without great difficulty. Sharps containers shall be considered "full" when they reach 2/3 capacity or the manufacturer's full line. Lids on filled sharps containers must be snapped closed, taped, or otherwise sealed to prevent loss of contents prior to disposal. Medical waste will be stored and transported in rigid containers to the Biohazardous Waste Storage Area located next to the Laundry Room at the back of the building. The containers will be labeled with the words "Biohazardous Waste," or the word "Biohazard," and the international biohazard symbol. This storage area will be locked at all times. Access will be limited to Environmental Services (ES) and Engineering Department personnel and the key will be available only from the ES office. Waste consisting of medical and nonmedical waste will be handled as medical waste except as follows:

1. Medical waste mixed with hazardous waste will be treated as hazardous waste.
2. Medical waste mixed with radioactive waste will be treated as radioactive waste.
3. Medical waste mixed with hazardous and radioactive waste will be treated as radioactive waste.

CHEMOTHERAPEUTIC WASTE:

All trace contaminated (e.g., empty vials, ampoules, IV bottles/bags, tubings and sharps) will be deposited in specially marked, yellow collection container labeled with the words "Chemotherapy Waste" or "Chemo." When the container is full, without compacting, the locking lid is to be secured to prevent loss of contents prior to disposal. Gowns, gloves, and other trace contaminated non-sharps objects may also be deposited in the container. These containers are picked up by Brand X medical waste hauler for transport to an approved incineration facility when routine medical waste is hauled away for treatment.

PATHOLOGY WASTE:

All Pathology Waste will be separated from other medical waste and hazardous wastes (such as fixatives). Waste will be placed in a red bag and deposited into a specially marked secondary container labeled with the words "Pathology Waste" or "PATH." The container will be stored in the morgue refrigerator until pick-up by Brand X medical waste hauler for transport to an approved incineration facility. Once specimens or tissues are deemed waste, they shall not be stored for more than seven (7) days at a temperature above 32° F. Placentas from obstetrics are stored in the chest freezer in the soiled utility room. This waste can be stored frozen (at or below 32° F) for not more than 90 days. At this hospital, Environmental Services staff will pick up placenta waste and deposit it into a clean pathology container for removal by Brand X at least every two weeks.

ACME HOSPITAL accepts no medical waste from any other facility.

Medical Waste Storage Methods

All medical waste will be collected and stored in the Biohazardous Waste Storage Area until transported by the medical waste hauler. All biohazardous waste shall be stored, handled or transported in containers that are leak resistant, have tight fitting covers and are kept clean and in good repair. This area shall be marked with warning

signs saying in English "CAUTION – BIOHAZARDOUS WASTE STORAGE AREA – UNAUTHORIZED PERSONS KEEP OUT," and in Spanish, "CUIDADO – ZONA DE RESIDUOS BIOLÓGICOS – PELIGROSOS – PROHIBIDA LA ENTRADA A PERSONAS NO AUTORIZADAS." Biohazard bags and filled sharps containers shall not be stored for more than seven (7) days at a temperature above 32° F. This seven (7) day period begins when any waste has been placed in the bag or container. See § 118280 (d)(1)(B) for 30-day allowance.

All reusable, *secondary*, rigid containers that are used for accumulation, transportation and storage of medical waste shall be washed and decontaminated after a maximum of seven (7) days, or more if visibly soiled. The approved method for decontamination at this hospital is the use of a bleach solution diluted 1:10. The solution should be allowed contact with the surface for a minimum of 3 minutes. The amount of solution mixed will be no more than can be used at any one time.

Medical Waste Treatment and Disposal Method

All Medical Waste will be picked up at least weekly by Brand X Hauler and transported to the off-site treatment facility identified below. Records of Medical Waste transported to Brand X will be kept in the Staff Development Office and retained for a minimum of three (3) years.

Emergency Action Plan

While it is highly unlikely that the company would experience a shutdown of operations, contingencies include use of an alternate hauler or retention of the medical waste for not more than seven (7) days from the point of generation above 0 degrees Centigrade (32 degrees Fahrenheit). Another contingency for less well-defined emergency situations would be to contact the Local Enforcement Agency (Department of Public Health, Medical Waste Management Program) for guidance at (916) 449-5671.

Spills are cleaned up utilizing a solution of 1/2-ounce Concept 256 germicidal in one (1) gallon of water with a contact time of three (3) minutes. The amount of solution mixed will not exceed the amount to be used at any one time.

Waste Hauler:

Brand X Medical Waste Hauler
7777 Broadway
Large Town, CA 95555
(213) 123-1234

Waste Treatment Facility:

Same... (or specify name, address, phone number, etc.)

I declare under penalty of law that to the best of my knowledge and belief the statements made herein are correct and true.

Signature/Title: _____ **Date:** _____

CHAPTER 2

Medical Waste Minimization

While the major focus of this chapter is on the minimization of medical waste, additional concepts for reduction of wastes within the organization will also be covered. Most of the principles of medical waste minimization can be applied to other systems within the health care facility resulting in more cost-efficient operations.

Medical waste minimization is centered on the elimination or reduction of the medical waste stream. There are several measures that can be instituted to achieve medical waste minimization including the following:

- Waste prevention – the elimination of the generation of medical waste.
- Source reduction – the reduction in the amounts of medical waste generated.
- Re-use – finding another use for a component so it does not become part of the medical waste stream.
- Recycling – handling or treatment of the material so it can be used in another process.

Understanding the Waste Systems Within the Facility

To successfully minimize wastes, one must first have an understanding of why the wastes are created, where they are created, their special handling processes for worker and public safety, regulatory compliance governing the handling of the waste and the varying costs of treating and disposing of these wastes. The following are the six major waste streams that can be generated in health care facilities:

- 1) liquid wastes,
- 2) solid wastes,
- 3) hazardous wastes
- 4) radioactive wastes
- 5) air emissions
- 6) medical wastes

Each of these streams is governed by a specialized set of laws to ensure worker and public safety, as well as environmental protection. The treatment and disposal costs vary from one waste stream to another, making it fiscally prudent to handle a waste in the cheapest waste category. Improperly categorizing solid waste as medical waste is a costly process that can easily be avoided. Preventing solid waste from being placed into the medical waste stream minimizes the amount of medical waste being generated, saving the health care facility money.

Waste Minimization Planning

The medical waste minimization strategy should be formally approved by top management within the health care facility as a demonstration of their commitment to the program. The next step in the planning phase for medical waste minimization is to assign responsibility for the program. The individual or team that is assigned the responsibility for implementing and coordinating the medical waste minimization program should be empowered by management to work across organizational

boundaries in carrying out the program. When management announces the waste minimization strategy and assignment of responsibility they should include an expectation of cooperation from every operational unit and individual throughout the organization.

Waste Minimization Assessment

Data regarding the current waste generated within the health care facility needs to be gathered during the assessment phase of the program. These data should include the amounts of waste generated for the various waste streams and the cost of disposal or treatment. The assessment should provide useful information to assist in determining where to initiate the waste minimization program in order to obtain maximum waste reduction and cost efficiency.

Medical Waste Minimization Implementation

Following completion of the waste minimization assessment, the facility should be ready to implement the medical waste minimization program. Using the data gathered during the assessment stage, decisions as to where to initiate the program should be made. The major medical waste generating areas of the facility should be targeted, as that is where the potential for the greatest accomplishments can be expected. There may be resistance to the waste minimization program, because it is something new. Staff may build barriers to the successful performance of the waste minimization program, because they may perceive it will create more work for them and they are already very busy. Overcoming these barriers will require excellent communication about the waste minimization program and strategies must be communicated to everyone involved. Staff from the Environmental Management Branch have found in surveys of hospitals where aggressive medical waste minimization programs have been implemented that reductions of 30 to 40 percent of the medical waste stream are not uncommon. This reduction in the medical waste results in significant cost savings.

The status and results achieved should be communicated to all staff throughout the medical waste minimization process and should be incorporated into new employee orientation. Charts showing achievements should be prominently displayed to encourage further actions in waste minimization be undertaken. Storyboards depicting the actions taken and results achieved within the various units of the facility should be developed. Success stories should be communicated to the neighboring community to demonstrate that the health care facility is a good environmental steward.

CHAPTER 3

Bloodborne Pathogen Standard⁶

Introduction

In California, the MWMA and the Bloodborne Pathogen Standard (Standard) govern two similar, but uniquely different cross-sections of the health-care facility waste stream. One reason is the definition and the other is the protection of different groups of individuals.

Healthcare and solid waste workers are the chief beneficiaries of the Act. However, hospital patients or the general public are included as well. Assuring the health and safety of all segments of the population is intended by the Act.

The Standard, in contrast, is meant to protect persons who may reasonably expect exposure to a bloodborne pathogen during the course and scope of their employment. The employer's responsibility is the protection of its workers. While MWMA waste must be produced as the result of an action related to the delivery of health care (or associated actions listed in the statute), bloodborne pathogen regulated waste is simply defined as blood, other potential infectious materials or contaminated items as defined in the standard, regardless of how it is produced. As a result, the application of the Standard extends well beyond the healthcare environment.

Definitions Pertinent to Waste Management

Under the Standard, regulated waste means "...liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological waste containing blood or other potentially infectious materials. Regulated [w]aste includes 'medical waste'..."⁷ 'Contaminated' means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on the surface or in or on an item."⁸

Since the purpose of this document is to prepare staff to perform self-assessment inspections for compliance with the MWMA, this portion will summarize only those key features relating to waste management. It is recommended that you review the *Bloodborne Pathogens Resource Package* (1993) published by the Cal/OSHA Consultation Service.

⁶ *Bloodborne Pathogens Guide to Compliance*, Cal/OSHA Consultation Services, 1993.

⁷ *California Code of Regulations*, Title 8, § 5193(b).

⁸ *Ibid.*

CHAPTER 4

Use of the Self-Assessment Tool For Medical Waste Management

A copy of the Self-Assessment Tool appears at the end of this chapter.

Part I: Waste Management Summary

Objective: To determine the types of wastes generated and that written medical waste management procedures and records are maintained. References noted below are from the California Health and Safety Code, Part 14, MWMA, Section 117600 *et seq.*

Part II: Removal for Treatment/Disposal

Objective: To determine the overall medical waste production of the facility and associated satellite facilities (if any). To ensure that appropriate permits, registrations and tracking are maintained. To ensure that storage areas meet standards.

Part III: Treatment/Sterilization of Medical Waste

Objective: To determine that on-site treatment is done in accordance with requirements of the Medical Waste Management Act.

Part VI: Pick-Up/Transport To Loading Dock For Removal/Treatment

Objective: To identify the practices used for the handling and transporting of medical waste prior to treatment and/or removal.

SELF-ASSESSMENT TOOL

INSTITUTION: _____	DATE OF ASSESSMENT: _____
ADDRESS/LOCATION WHERE SELF-ASSESSMENT CONDUCTED: _____	ASSESSMENT _____ of _____ ASSESSMENT/yr SIGNATURE OF ASSESSOR: _____
UNIT: _____	SIGNATURE OF ADMINISTRATOR: _____

Review Checklist	Yes	No	N/A	Comments/Justification
Part I: Waste Management Summary				
A. Does the facility handle the following:				
1. Biohazardous waste?				
(a) Are biohazardous wastes treated on-site?				
(b) If yes, state type of treatment: _____				
2. Liquid waste?				
(a) Are liquid wastes treated before disposal?				
(b) If yes, state type of treatment: _____				
3. Pathology waste?				
(a) Is the excess fixative decanted?				
(b) Treated on-site?				
4. Trace chemotherapeutic waste?				
(a) Treated on-site?				

Review Checklist	Yes	No	N/A	Comments/Justification
(b) Sent off-site for treatment?				
5. Out-dated pharmaceutical waste?				
(ii) By an approved alternative treatment? State technology used: _____				
6. Does the total amount of medical wastes produced above equal or exceed 200 pounds per month?				
(a) If yes, give large quantity generator reg. #: _____ If no, give the small quantity generator #: _____				
B. Does the facility have a current Medical Waste Management Plan (Plan)?				
1. Date the Plan was last reviewed? _____				
2. Where is the Plan located? _____				
C. Does the facility have a voluntary sharps return program?				
1. If yes, does your Plan include the voluntary return program?				
2. Where are the sharps returned? State location: _____				
D. Does the facility receive home-generated sharps waste?				
1. If yes, does the Plan reflect the receipt of home- generated sharps?				
2. Where are they received? _____				
E. Does the facility receive any medical wastes from other sources?				
1. Private physician or dentist offices more than 400				

Review Checklist	Yes	No	N/A	Comments/Justification
yards from facility?				
2. Ambulances or air ambulances?				
3. Other sources? Describe: _____				
F. Does the facility have a source reduction plan?				
1. If yes, are records kept on amount of waste reduced?				
2. If yes, where are records maintained? _____				
G. Does the facility have a recycling program?				
1. If yes, are records kept on amount of waste recycled?				
2. If yes, where are records maintained? _____				
H. Does the facility track the amount of waste generated?				
1. If yes, where are records maintained? _____				
Part II: Consolidation and Transport				
A. Does the facility have satellite facilities more than 400 yards away generating medical waste? If "no," go to B. If "yes," give reg. # _____				
1. Do these satellite facilities transfer medical waste to the main facility?				
(a) If yes, does the facility have a LQHE?				
2. Does the facility use its own vehicles to transport medical waste >400 yards from its premises?				
(a) If yes, list the hauler # _____				
3. Does the main facility receive medical waste from off-site and treat it at the facility?				

Review Checklist	Yes	No	N/A	Comments/Justification
(a) If yes, go to A. 4, below.				
(b) If no, list name of company hauling waste and go to B.				
4. Does the main facility treating satellite waste have an off-site treatment permit?				
(a) If yes, give Off-site Permit # _____				
B. Does the facility treat its medical waste on-site?				
1. If yes, list on-site treatment permit # and go to Part III.				
2. If no, list name/# of hauler and go to C. _____				
C. Are appropriate shipping/tracking documents issued and signed for each load removed?				
D. Are documents from tracking/off-site treatment kept?				
E. Are they saved for at least 3 years? Location of shipping/tracking and treatment documents: _____				
F. Is the storage area for medical waste prior to transport off-site:				
1. Properly secured to keep unauthorized people out?				
2. Equipped with warning signs in appropriate languages?				
3. Posted with signs legible during daylight from 25 ft. away?				
4. Protected from animals and elements; not a breeding place or food source for insects/rodents?				
G. Are emergency spill procedures kept/posted at the pick-up dock?				

Review Checklist	Yes	No	N/A	Comments/Justification
1. Is the spill procedure consistent with the Medical Waste Management Plan?				
2. Is there a posted list of emergency numbers?				
3. Is this list current? (last updated on ____/____/____)				
Part III: Treatment/Sterilization Of Medical Wastes				
A. If autoclave(s) are used, complete the following:				
1. Are there written Standard Operating Procedures (SOP) for the unit(s)? Location of SOPs: _____				
2. Are appropriate operational records kept?				
3. Is there log of temp/pressure for each sterilizer run?				
(a) Does the log show that minimum temp/pressure are met for each load?				
4. Are thermometers calibrated at least once a year?				
5. Are biological indicators used to verify sterilizer operation at least monthly? Name of indicator used: _____ Location of records for 1 - 5 above: _____				
(a) Are temperature strips verified?				
B. If microwave treatment is used complete the following:				
1. Are there written SOPs for the unit(s)? Location of the SOPs: _____				
2. Are appropriate operational records kept?				
3. Are appropriate spore tests run? Location of spore test records: _____				

Review Checklist	Yes	No	N/A	Comments/Justification
4. Have HEPA filters been tested per manufacturer's specifications? Location of HEPA filter test records: _____				
C. Are other alternative treatment technologies being used?				
1. Are there written SOPs for the unit(s)? Location of the SOPs: _____				
2. Are appropriate operational records kept?				
3. Are appropriate spore tests run? Location of spore test records: _____				
4. If applicable, have HEPA filters been tested per manufacturer's specifications? Location of HEPA filter test records: _____				
D. Are logs of equipment/treatment failures kept?				
E. Are treatment records kept for at least 3 years?				
F. Has staff been appropriately trained for the tasks performed? Location of training records: _____				
1. Are they using appropriate PPEs? (gloves, coveralls, eye protection, etc.)				
G. Are maintenance records maintained for all equipment, including ancillary equipment such as grinders and compactor? Location of maintenance records: _____				

Review Checklist	Yes	No	N/A	Comments/Justification
Part IV: Room/Area Of Waste Generation				
A. Is medical waste separated and contained at generation?				
B. Are approved containers used for all sharps?				
1. Are they appropriately labeled/identified?				
2. Are they secured to prevent removal/tampering?				
3. Are they changed when not more than 2/3 full?				
4. Is supply of sharps containers adequate?				
C. Are approved biohazardous waste containers used?				
1. Are they appropriately labeled/identified?				
2. Are containers lined with appropriate red bags?				
3. Are bags properly sealed/twist-tied to prevent spills?				
D. Have all staff been trained in medical waste management? Location of records: _____				
1. Do staff use appropriate gloves, other PPE?				
E. Are medical wastes transported to a dirty utility/storage area? <i>If "yes," go to Part V.</i> <i>If "no," go to Part VI.</i>				
(b) Are these containers routinely cleaned/disinfected?				
(c) Type of disinfection used?				
i. If steam heat, is proper temperature attained?				
ii. If chemical, is concentration/contact time correct?				
iii. Are staff trained in proper disinfection techniques?				
(d) Lined with appropriate red bags?				

Review Checklist	Yes	No	N/A	Comments/Justification
(e) Clearly labeled and visible from all sides and top?				
(f) Kept tightly closed at all times?				
3. Are storage times for medical waste appropriate?				
(a) How are long wastes stored in this area?				
4. Is an approved medical waste compactor used prior to treatment?				
(a) Where is the compactor located? _____				
Part V: Utility Room/Intermediate Storage				
A. Is the utility room/area properly secured at all times and locked if necessary?				
1. Are the secondary containers in the storage area clearly labeled with appropriate symbol on all sides?				
2. Are secondary collection containers:				
(a) Impervious and easily cleaned?				
(b) Is there evidence of leakage?				
(c) Is the compactor clean and well maintained?				
(d) Is it labeled with a biohazard sign?				
(e) Is the HEPA filter tested? Date of last test: _____ Location of records: _____				
Part VI: Pick-Up/Transport To Loading Dock for Removal/Treatment				
A. Are the carts used to transport medical wastes:				
1. Impervious and easily cleaned?				
2. Are transportation carts routinely cleaned/disinfected?				

Review Checklist	Yes	No	N/A	Comments/Justification
3. Type of disinfection used?				
(a) If steam heat, is proper temperature attained?				
(b) If chemical, is concentration/contact time correct?				
4. Clearly labeled with the appropriate symbol/wording on all sides?				
5. Clean and in good repair (with wheels working, etc.)?				
B. Are other materials on the carts (boxes, waste papers, etc.) adequately segregated from medical wastes?				
C. Are the staff that load, transport and unload the carts:				
1. Properly trained? Location of training records:				
2. Using approved Personal Protective Equipment?				

APPENDICES

Appendix A:

Preventing the Most Frequently Found
Medical Waste Violations

Appendix B: Glossary

Appendix A

Preventing the Most Frequently Found Medical Waste Violations

This chapter identifies and describes the most frequently found violations of the MWMA by inspectors from the Medical Waste Management Program (Program) and actions that can be taken to prevent these conditions, or to correct them should they occur. The violations are listed for both large and small quantity generators of medical waste.

1. § 117960: Failure to file with the local enforcement agency a complete and accurate Medical Waste Management Plan.

Comments: Medical Waste Management Plans describe how the various types of medical waste that are generated within a facility are to be handled, stored, and treated.

Corrective Action: It is the facility's responsibility to develop and maintain an accurate, up-to-date Medical Waste Management Plan. It is the Program's policy to work with the generator to develop or update the plan as needed. Chapter 4 of this manual contains the pertinent information necessary to develop and maintain a workable Medical Waste Management Plan.

2. § 118280: Failure to properly containerize biohazard bags.

Comments: This violation most frequently is found in facilities that use a hamper-type support for biohazard bags or where bags are placed directly on the floor.

Corrective Action: Use biohazard bags with hampers only in surgery rooms where public and staff access is strictly controlled. Biohazard bags in all other areas should be kept in rigid containers that are leak resistant, clean, in good repair, and covered with a tight fitting lid. Biohazard bags must not be stored directly on the floor, but must be placed in rigid containers.

3. §117635 (f): Improper management of biohazardous waste that is comprised of human surgery specimens or tissues which have been fixed in formaldehyde or other fixatives or waste that is contaminated through contact with, or having previously contained, trace amounts of chemotherapeutic agents.

Comments: The most common violations found within this category involve the pathology waste stream not being segregated from the rest of the biohazardous wastes to ensure that this waste is incinerated.

Corrective Action: Segregate all pathology waste at the point of generation and place in secondary containers that are properly labeled. Human specimens or tissues, fixed or not (fixed with formaldehyde or other fixatives) shall be segregated for storage after the free liquid fixative has been removed and, when placed in a secondary container, that container shall be labeled on the lid and sides with the words "Pathology Waste," "Path," or other labeling approved by the Department.

4. § 118215 (c) (1-5): Steam sterilization for on-site medical waste treatment is not being conducted according to the requirements of the law.

Comments: This violation is found where large quantity generators with on-site treatment are using autoclave technology, but their process is found to be lacking standard written operating procedures, recording or indicating thermometers, use of inappropriate biological indicators (for temperature used), use of a biological indicator "control" and the keeping of required records.

Corrective Action: The Medical Waste Management Plan for the facility should be reviewed to determine if it contains the proper procedures to follow for the autoclave process. The plan must include proper operating procedures and a description of how the process is audited to ensure adequate treatment takes place. Operational records of the treatment process specified in the plan must be maintained at the facility for a period of three years.

5. § 118222 and 118275(g): Improper segregation of pharmaceutical waste.

Comments: This violation is found when generators dispose of pharmaceutical waste in sharps waste containers, in hoppers or in the solid waste.

Corrective Action: Segregate all pharmaceutical waste at the point of generation into a pharmaceutical waste container. Provide containers in all areas of the facility that generate this waste.

APPENDIX B

Glossary

Biohazardous waste: See § 117635 of the Act.

Biological indicators: Organisms which, by virtue of their failure to grow—or other such observable phenomenon—provide objective proof of the efficacy of a treatment system.

Bloodborne Pathogen Standard: Title 8, California Code of Regulations General Industry Safety Order 5193. Defines employer responsibilities for the assurance of the health and safety of employees in matters of potential exposure to blood and bodily fluids; presumes those fluids to contain HIV, HBV, or other infectious agents.

Body Substance Isolation (BSI): Often used synonymously with Universal Precautions (q.v.). However, whereas Universal Precautions refers to a limited set of body fluids, BSI applies to all body fluids. Thus, in managing medical wastes, this standard would result in the potential capture as medical waste of a larger segment of the total waste stream.

Containerized: Placed in a container. Containerization of medical waste, of biohazard bags, or of sharps waste, is subject to specific requirements found, respectively, in §§ 118275, 118280, and 118285 of the Act.

Decanted: (A liquid) carefully separated from any denser solids contained therein by pouring, so as to minimize the residual liquid remaining, such as pathology waste.

Exposure Control Plan: 8 CCR 5193 (c)(1) A plan set forth in the Bloodborne Pathogen Standard to eliminate or minimize the potential occupational exposure of each employee to bloodborne pathogens. It consists at a minimum of an exposure determination (by tasks and job classification), procedures for implementing required elements of the Standard, and exposure incident evaluation protocols.

HBV: Hepatitis B Virus, the causative agent of type B hepatitis.

HEPA filters (high efficiency particulate air): Air filters which will capture virtually 100% of respirable particles in air (10 micrometers and less) down to roughly 10^{-2} micrometers in size. Used to maintain biological isolation of negative pressure chambers in which aerosolized biohazardous agents may be produced.

HIV: Human Immunodeficiency Virus. The causative agent of acquired immunodeficiency syndrome (AIDS).

Large quantity generator: A producer of 200 or more pounds of medical waste per month. See § 117680 of the Act.

Limited Quantity Hauling Exemption: An exemption, issued to a generator of less than 20 pounds of medical waste per week (or their employer), from the general requirement that all haulers of medical waste must be registered as hazardous waste haulers with DTSC.

Liquid or semi-liquid wastes: Wastes in a liquid physical state, or containing solid matter carried in sufficient liquid to allow it to flow as a liquid.

Main facility: A healthcare organization's principal location for the administration of health care.

Medical Waste Management Plan: A plan developed by a medical waste generator communicating to the enforcement agency specific handling, storage, treatment and disposal practices which the generator will employ in compliance with the law. See §§ 117935 and 117960 of the Act.

Medical Waste: See § 117690 of the Act.

Off-site medical waste treatment facility: A medical waste treatment facility is not a generator of medical waste, or which accepts waste from other any other generators which are greater than 400 yards away **and** which are not physicians or surgeons on staff of the facility treating the waste.

On-site Medical Waste Treatment Facility: A facility which treats only medical waste produced at the health-care facility which houses it, or which is generated 400 yards or less away or by physicians and surgeons who are on staff of the facility and are small quantity generators. See §§ 118140 and 118415 of the Act.

Pathology waste: Includes biopsy materials, and all human tissues and anatomical parts that emanate from surgical, obstetrical, autopsy and laboratory procedures. Pathology waste must be treated by incineration. See §§ 118220 and 118222 of the Act.

Personal Protective Equipment (PPE): Barrier protection such as gloves, suits, eye/face-protection. It must be sufficient to prevent blood or OPIM from reaching skin, eyes, mouth or other mucous membranes under normal conditions of use.

Pharmaceutical waste: See § 117747 of the Act.

Satellite facility: A health care facility operating as a part of a main facility, but at a location other than the main facility. For purposes of medical waste management, a satellite facility is offsite if it is more than 400 yards from the main facility.

Sharps waste container: Means a rigid puncture –resistant container that when sealed, is leak resistant and cannot be reopened without great difficulty. See § 117750 of the Act.

Sharps: See § 117755 of the Act.

Small quantity generator: A producer of less than 200 pounds of medical waste per month. See § 117760 of the Act.

Spore test: A microbiological test whereby spores of a test organism are exposed to treatment conditions, then incubated to encourage germination and growth of vegetative organisms. If there is no growth, the treatment was successful.

Standard operating procedures: Written minimum operating parameters for the operation of a steam sterilizer. Operating records confirming adherence to these and related procedures must be maintained for a minimum of three years. See § 118215 (c)(1) of the Act.

Storage area: A designated accumulation area, or offsite point of consolidation, or transfer station, or other registered facility, for the holding of medical waste, in accordance with the requirements of Chapter 9. See § 117765 of the Act.

Universal Precautions: The application of exposure protection to all potential exposure situations, based on the presumption that any of a specified set of human bodily fluids (blood and blood products, and body fluids listed as “Other Potential Infectious Materials” in the Bloodborne Pathogen Standard) which may be present, has come from an infected individual. (First promulgated by Centers for Disease Control in August 1987 [MMWR 1987; 36 (Suppl no. 2S)] and June, 1988 [MMWR 1988; 37: 377-383].)

¹ Council on California Competitiveness, *California's Jobs and Future*, April 23, 1992, page 3.

² *Ibid.*, pp. 6-7.

³ Taken from the notes of the January 8, 1996 meeting of the *Medical Waste Self-Assessment Project*, January 23, 1996.

⁴ Hsiao, Peter, “Prize Policies - Evaluating Environmental Amnesty Programs,” *Los Angeles Daily Journal*, January 26, 1996.

⁵ Deming, W. Edwards, *The New Economics For Industry, Government, Education*, Massachusetts Institute of Technology, 1993, page 98.

⁶ Dean, James W., Jr. and James R. Evans. *Total Quality Management, Organization, and Strategy*, West Publishing Company, 1994, page 260.

⁷ Sources: *Bloodborne Pathogens Guide to Compliance*. CAL/OSHA Consultation Services: 1993.

⁸ Title 8, *California Code of Regulations*, Section 5193(b).

⁹ *ibid.*

¹⁰Section 3203, Title 8, *California Code of Regulations*.

¹¹ All sections (ə) cited in this document reference the California HSC unless otherwise indicated.