Hazardous Materials / Hazardous Waste Management Plan

Ronald Reagan UCLA Medical Center

and

Resnick Neuropsychiatric Hospital
(EC.02.02.01)

2013

Ronald Reagan UCLA Medical Center and Resnick Neuropsychiatric Hospital Hazardous Materials / Hazardous Waste Management Plan

Contents

UCLA Medical Center and Neuropsychiatric Hospital
Hazardous Materials and Hazardous Waste Management Plan

Purpose
The purpose of the UCLA Medical and Resnick Neuropsychiatric Hospital Hazardous Materials and Hazardous Waste Management Plan is as follows.

1. To protect the health and safety of staff, patients, and visitors and minimize the risk associated with hazardous materials, through the development of policies and procedures regarding the selection, handling, storage, use and disposal of hazardous materials and waste from receipt or generation, through use and final disposal. Hazardous materials and hazardous waste streams include, but are not limited to:

    - Chemical
    - Biological
    - Radioactive
    - Pharmaceutical and chemotherapeutic
    - Electronic
    - Hazardous gases
    - Universal waste
    - Mixed wastes

2. To minimize risks associated with the use of hazardous energy sources including radiation-producing machines, radioactive materials, and lasers.

3. To ensure that hazardous materials and waste are identified, labeled, evaluated, inventoried, handled, managed and monitored in compliance with applicable regulations to minimize risk to staff, patients and visitors and their impact on the environment.

4. To provide emergency procedures that prescribe specific precautions, equipment, and protective equipment to be utilized in response to hazardous materials spills, releases and exposures.

5. To provide the protocol for reporting and investigating hazardous materials spills, releases, and exposures in order to provide the appropriate and effective response, and to prevent reoccurrences.

6. To ensure that employees are oriented to, and educated about the proper procedures to follow in order to protect themselves from exposure to hazardous materials.

7. To confirm the effectiveness of engineering and administrative controls with environmental air monitoring surveys and work procedure analyses.

8. To ensure that mandated licenses and permits are maintained in compliance with applicable law and regulations and the granting regulatory agency requirements.

9. To identify and pursue hazardous waste and toxic use reduction opportunities.

10. To provide a mechanism for the review, development and dissemination of hazardous materials policies and procedures.

11. To describe the process by which the annual evaluation of the Hazardous Materials and Waste Management Program's objectives, scope, performance and effectiveness is conducted.

Mission

The mission of the Ronald Reagan UCLA Medical Center and Resnick Neuropsychiatric Hospital is to deliver leading edge patient care, education and research.

A safe, functional and effective environment for patients, staff, and other individuals in the hospital is crucial to providing quality patient care and achieving good outcomes.

The Hazardous Materials and Waste Management Plan support such an environment with programs intended to ensure that the Medical Center's and Neuropsychiatric Hospital's use of hazardous materials does not pose a risk to people or the environment.

This Plan applies to chemicals and chemical waste, infectious materials and medical waste, radioactive materials and radioactive waste, hazardous drugs and pharmaceutical waste, compressed gases and electronic waste.

Scope

The scope of the Hazardous Materials and Waste Management Plan encompasses the UCLA Medical Center and Resnick Neuropsychiatric Hospital including the Medical Plaza and other outpatient facilities, and all other associated buildings. This includes staff in leased space.

All UCLA Health System staff that may handle or otherwise come into contact with hazardous materials or hazardous energy sources is expected to understand and adhere to applicable policies. Medical staff involvement with hazardous materials programs is appropriately variable based on the physician population and hazardous material risk.

Responsibilities and Authority

Chief Executive Officer, UCLA Health System

By the authority of the Regents of the University of California, the Chief Executive Officer is responsible to the Vice Chancellor of Medical Sciences and the Chancellor for the Hazardous Materials and Hazardous Waste Program. The CEO has delegated specific administration of the Hazardous Materials and Hazardous Waste Program to the Safety Department.

Chief Operating Officer

The Chief Operating Officer is responsible for ensuring that the Hazardous Materials and Waste Management Program are in compliance with federal, state and local requirements. The COO also ensures that adequate and appropriate space and equipment is provided for the safe handling and storage of hazardous materials and waste.

The Chief Operating Officer delegates responsibility for the overall coordination of the Hazardous Materials and Waste Management Program to the Safety Department.

Director/Safety Officer, Safety Department
The Director of the Safety is responsible for the development, implementation, evaluation, reporting and documenting associated with the Hazardous Materials and Hazardous Waste Program. The Director is also responsible for ensuring hazardous materials and wastes are handled and managed safely and in compliance with applicable regulations. The Director consults with the campus Office of Environment, Health and Safety as needed.

The Director or their designee conducts periodic assessments of Medical Center and Neuropsychiatric Hospital hazardous substance generation and storage areas and evaluates hazardous materials handling procedures. Inspections are conducted of all departments at least annually to ensure compliance with applicable regulations and hazardous materials policies. Reports of significant problems and recommendations are forwarded to the appropriate department manager and the Environment of Care Committee.

The Safety Department maintains documentation, including required permits, licenses, and other documents necessary to demonstrate compliance with applicable regulations.

The Safety Department coordinates with departments regarding the proper in-house transportation, storage and disposal of hazardous materials. The Director also assists departments with their efforts to comply with the Hazard Communication policy.

The Safety Department is responsible for the Hazardous Waste Program to ensure that hazardous waste is properly handled, contained, stored, and labeled, in compliance with federal, state and local regulatory requirements.

The Safety Department represents the Health System when coordinating with licensed hazardous waste haulers and other related service providers.

The Safety Department monitors hazardous waste disposal practices, including documentation, as required by law.

Environment of Care Committee (ECC)
The Environment of Care Committee is responsible for overseeing the development and analysis of performance monitors and performance improvement projects intended to identify and minimize potential risk. The ECC also examines institutional hazardous materials and waste related issues to ensure best handling and management practices are followed.

Medical Radiation Safety Committee
The Medical Radiation Safety Committee reviews applications for the use of radioactive materials on human subjects, with regard to issues of safety and scientific merit. They have the authority to establish additional requirements for safety, training and professional competence.

Radiation Safety Committee
The UCLA Radiation Safety Committee maintains surveillance of the Radiation Safety Program, monitors radiation exposures at ALARA levels, and provides an oversight function

of the campus Radiation Safety Program. It is responsible for all activities at UCLA that involve ionizing radiation, radioactive materials, and radiation-producing machines. The Committee develops campus radiation safety policies.

Laser Safety Committee
The Laser Safety Committee oversees issues associated with clinical laser use including safety, policy maintenance, training and event investigation. Representation includes:

- Anesthesiology
- Dermatology
- Head and Neck
- Jules Stein Eye Institute Operating Room
- Main Operating Room
- Clinical Engineering
- Safety Department
- Campus Office of Environment, Health and Safety

Department Heads
Department heads and supervisors monitor and ensure compliance with applicable hazardous materials and hazardous waste policies. They are responsible for the following:

1. Implement the Hazardous Materials and Waste Management Plan.

2. Ensure hazardous materials and waste are properly handled, contained, stored and labeled as required by applicable federal, state and local regulations and Health System policies.

3. Develop and implement department specific policies concerning the use of hazardous materials in their departments.

4. Maintain compliance with the Hazard Communication standard by ensuring departmental staff have current knowledge of material safety data sheets (MSDS) accessibility and that staff has been adequately trained regarding the use of hazardous materials within their department.

Employees
Employees are responsible for the following:

1. Maintain familiarity with hospital policies regarding the safe handling of hazardous materials and understand their specific responsibilities.

2. Attend in-service training sessions as required.

3. Maintain familiarity with Health System policies and response procedures for hazardous materials spills and exposures.

4. Maintain awareness of chemical, infectious and radioactive hazards both within their department and elsewhere in the facility. Report hazards to their supervisor or the Safety Department.

5. Maintain familiarity with the Health System Hazard Communication Program and understand the content and purpose of a material safety data sheet (MSDS).

Organization

The Hazardous Materials and Waste Program is a multi-department-administered program.

Chemical
Chemical materials and waste issues are predominantly managed by the Clinical Laboratories, Environmental Services, Pharmacy, and Safety Departments, with assistance from the campus Office of Environment, Health and Safety.

Biological
Infectious materials and waste issues are predominantly managed by the Environmental Services, Hospital Epidemiology, Nursing and Safety Departments.

Radioactive
Radioactive materials and waste issues are managed by the Nuclear Medicine, Radiation Oncology, Radiology, the Office of Emergency Preparedness, Safety Department, and the campus Radiation Safety Office.

Pharmaceutical and Chemotherapeutic
Pharmaceutical and chemotherapeutic materials and waste issues are primarily managed by Environmental Services, Nursing, Pharmacy and Safety.

Compressed Gases
Compressed gases issues are primarily managed by Materials Management, Health System Facilities, Respiratory Therapy and Safety.

Electronic
Electronic waste issues are primarily managed by Clinical Engineering, Environmental Services and Medical Information and Technology Services.

The Health System contracts with different vendors for the transporting and disposal of the different hazardous waste streams. Information for specific waste streams can be obtained from the Safety Department.

Hazardous Chemicals

Policies that address the safe handling and disposal of chemical substances are designed to ensure that employees are informed of the hazards of the materials with which they are working. In addition, there are provisions for personal protective equipment for eye, skin and respiratory protection. Ensuring the safe and compliant disposal of hazardous chemical substances is also stressed.

Hazardous Substance Inventory

<u>Department Hazardous Materials Inventory</u>
Departments who store or use hazardous materials considered potentially hazardous to employees maintain an Inventory of Hazardous Materials in compliance with Medical Center

policy and the California Code of Regulations, Title 8, Section 5194, “Hazard Communication”.

This inventory is updated at least annually or as new materials are introduced into the department or as others are discontinued. In most cases the chemical name of the hazardous substance is used, however the product or trade name may be used provided the name corresponds with the Material Safety Data Sheet.

Employees are oriented to their department's inventory and how to access MSDS’s containing relevant chemical safety information online.

Business Plan

The Safety Department maintains an inventory of the locations of bulk storage of hazardous chemicals and gases in compliance with the Chemical Inventory and Business Plan requirements in the California Health and Safety Code, California Code of Regulations, Titles 19 and 24, and the Los Angeles Certified Unified Program Agency (CUPA).

This inventory is available to assist emergency responders with their planning and response efforts associated with hazardous materials emergencies within hospital facilities.

This inventory is reviewed and updated periodically, including during construction and department moves.

(Note: The CUPA inventory is to be updated by the Summer of 2013.)

Selection

The selection process for the use of potentially hazardous chemicals includes an evaluation of each of the following criteria:

- availability of a less toxic alternative
- the need for, and availability of, engineering controls and personal protective equipment
- storage requirements
- transporting requirements
- disposal requirements
- regulatory requirements
- availability
- cost

This evaluation may occur at the department or committee level. Safety Department representation on the Products Committee facilitates this review.

Handling and Use

Chemical handling and use policies must be specific to the hazards associated with a particular substance. This ensures that employees are provided the most accurate and current information regarding ways to minimize the hazards and risks associated with a specific material. Chemicals are used in accordance with manufacturer instructions.

Handling guidelines and policies include information regarding:

- hazard class (e.g. flammable, toxic, corrosive, reactive, explosive, other)
- information obtained from container labels, material safety data sheets (MSDS) and other resources
- engineering controls and personal protective equipment
- substance-specific hazard minimization strategies
- potentially incompatible adjacent activities
- chemical state (solid, liquid, gas)
- disposal requirements

Storage
Chemical storage parameters include temperature control, ventilation, segregation, isolation, ignition control, and regulatory considerations. Departments are responsible for ensuring that chemicals they use or are otherwise under their administrative control, are stored safely. Material Safety Data Sheets provide chemical-specific storage requirements. The Safety can also assist as needed.

Observing the following general guidelines can minimize risks.

- Chemicals and cleaning products should be segregated according to hazard class and away from clinical supplies.
- Chemical containers should be properly labeled with contents, hazard and date opened.
- Isolate flammable liquids from heat sources.
- Store bulk solvents and flammable liquids in safety cans and/or cabinets.
- Do not store chemicals in areas accessible to visitors and children.
- Store incompatible chemicals in separate compartments.
- Store chemicals in well-ventilated areas.
- Store large containers on lower shelves. Do not place at or above eye level.
- Store chemicals in secondary containers.

Transportation
Chemicals must be transported safely to minimize the potential for spills, releases or accidental exposures. The following general guidelines should be followed:

- Chemicals should be transported in sealed and labeled, primary containers.
- Primary containers should be transported in secondary containers.
- Only manageable quantities of chemicals should be hand carried. Heavier quantities should be placed on a cart.
- Only persons knowledgeable about the chemicals' hazards should transport the chemical.

Waste and Disposal
Federal, state and local regulations specific to the labeling, packaging and disposal of hazardous materials govern hazardous waste. All Health System chemical waste policies and procedures comply with these regulations and accepted safe handling protocol.

Hazardous Chemical Identification
"Hazardous chemical" means any substance that is flammable, corrosive, toxic, reactive or is a physical hazard. This includes substances listed in any one of the following sources:

- California Code of Regulations (CCR) Title 8, Section 339. "The Director's List of Hazardous Substances"
- California Code of Regulations (CCR) Title 8, Section 5155. "Permissible Exposure Limits for Chemical Contaminants"
- Code of Federal Regulations (CFR) Part 1910, Subpart Z "Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)"
- Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment, American Conference of Governmental Industrial Hygienists (ACGIH)
- National Toxicology Program (NTP), Annual Report on Carcinogens
- International Agency for Research on Cancer (IARC), Monographs

Hazard Assessment
Individual departments are responsible for those chemicals identified and known to be present in their areas. Accordingly, departments assess which employees may potentially come into contact with these substances, by inhalation, ingestion, or direct skin contact. The Safety Department is available to assist department managers with this evaluation.

An effort is made to substitute a hazardous material with a less hazardous chemical whenever possible.

Chemical Spills
The range and quantity of hazardous substances in the Medical Center requires preplanning to safely respond to chemical spills. Only knowledgeable and experienced personnel should clean up a minor chemical spill. Spill response kits or materials with instructions, absorbents, reactants, and protective equipment should be available.

A "minor" chemical spill is one that staff is capable of handling safely if the following criteria are satisfied:

- Staff have access to and wear, appropriate personal protective equipment
- Staff have access to and use, appropriate spill clean-up equipment
- Staff have a way to dispose of waste generated from spill clean-up activities
- Staff have been trained
- Staff feel comfortable cleaning up the spill

All other spills are considered "major" and must be cleaned up by trained Hazmat Chemical Spill Response Team members from the Safety Department or the campus Office of Environment, Health and Safety.

The Safety Dept. is responsible for investigating significant hazardous chemical spills and unplanned releases. Department heads and other staff are included in the investigation to help identify causative factors and develop strategies to prevent reoccurrence. Spills and exposures are reported by any of the following methods:

- Direct page from the Emergency Department or Medical Center Communications.
- Physicians Report of Occupational Injury/Illness from Human Resources.
- Claims Reports from Professional Risk Management.
- Incident Report and Referral for Medical Treatment form
- Online Event Reporting System
- Direct call / page from Occupational Health Facility
- Direct call / page from department heads, supervisors, employees.

Hazardous materials spill response procedures are presented in Health System Policy #HS8207, “Chemical Spill or Release - Code Orange”.

Chemical Exposure
Staff, visitors, and patients can become contaminated with a hazardous substance in a variety of ways, including:

- contact with airborne contaminants
- splash
- walking through a spill on the floor
- contact with contaminated equipment

General guidance regarding decontamination methods and techniques are presented below. The exact procedure is determined after evaluating a number of factors related to the incident and consulting material-specific literature such as the material safety data sheet.

1. Eliminate further contact with the material.
2. Identify the material.
3. Decontaminate with copious amount of water or other appropriate material.
4. Remove contaminated clothes and other material in contact with victim.
5. Assess the amount and concentration.
6. Obtain medical assistance. Call 911.
7. Notify supervisor.

Orientation/Education
Department Heads are responsible for ensuring that their employees are trained and competent regarding the safe use of the hazardous materials with which they may be working. For employees who have direct contact with hazardous materials and waste this includes precautions for selection, handling, storage, use, and disposal. They are also instructed about emergency procedures for hazardous material releases and exposures including the health hazards of mishandling hazardous materials and emergency reporting procedures.

All new employees attend New Employee Orientation, which includes information regarding hazardous materials and hazardous waste safety issues, along with an overview of available resources. In addition, employees’ role in maintaining a safe patient care environment is explained.

Every employee is expected to read each Environment of Care section of the Staff Information Handbook and take the posttest, annually. A perfect score is considered passing. Wrong answers are corrected and reviewed with the employee at that time.

The Safety Department routinely conducts Chemical Safety, Hazard Communication and Material Safety Data Sheet training for appropriate departments. In addition, large, open-invitation, hazardous materials seminars are also available as needed.

Every employee is given department-specific safety training annually which may include a hazardous materials component, if appropriate. In addition, specific job or area-specific training may be given more frequently to address potential safety hazards associated with the introduction of hazardous materials.

Policies
Policies related to Hazardous Chemicals:

- Hazard Communication, MSDS Program (HCP)
- Hazardous (Chemical) Waste Disposal
- Gluterlaldehyde
- Liquid Nitrogen
- Chemical Spill or Release – Code Orange
- External Hazardous Material Release (Toxic Cloud) – Code Orange
- Mercury Spill Response Procedures
- Compressed Gas Cylinder Transport, Storage and Use
- Management of Contaminated Patients
- Ribavirin Safety Precautions and Administration
- Cytotoxic Agents

Biological and Chemotherapeutic Waste

Handling and Use
Policies that address the safe handling and disposal of infectious materials and medical waste are intended to protect staff and patients from exposure to bloodborne or other types of pathogenic agents. This information includes personal protective equipment, training, and procedures for the packaging and disposal of medical waste.

Handling and use procedures for potentially infectious materials and biohazardous medical waste are presented in Infection Control Policy C006, “Exposure Control Plan for Bloodborne Pathogens”. Additional handling procedures for medical waste are presented in the “UCLA Health System Medical Waste Management Plan”.

Storage - **Storage Facilities**
Bulk medical waste is stored at the following locations.

- Reagan Medical Center, B-level loading dock
- Medical Plaza 200, A-level loading dock
- Consult Medical Waste Management Plan for other storage locations.

Storage - Laboratory Specimens
Storage procedures for laboratory specimens are presented in Infection Control Policy C006, “Exposure Control Plan for Bloodborne Pathogens”, maintained by Hospital Epidemiology. The Infection Control Committee reviews this policy at least every three years.

Storage - Medical Waste
Storage procedures and requirements for medical waste, including sharps, are presented in the following documents.

1. UCLA Health System Medical Waste Management Plan, (maintained by the Safety Department)

2. Infection Control Policy C006, "Exposure Control Plan for Bloodborne Pathogens" (maintained by Hospital Epidemiology).

The Medical Waste Management Plan is reviewed at least every three years by the Environmental Services, Hospital Epidemiology and Safety Departments.

Medical Waste storage facilities are inspected at least annually during the Department of Public Health Medical Waste Annual Inspection. They are also included in the semi-annual Environmental Rounds.

Transportation
Transportation procedures for potentially infectious materials and bio-hazardous medical waste are presented in Infection Control Policy C006, "Exposure Control Plan for Bloodborne Pathogens". Additional handling procedures for medical waste are presented in the "UCLA Health System Medical Waste Management Plan".

Permits
The UCLA Medical Center and Resnick Neuropsychiatric Hospital possess a Large Quantity Medical Waste Generator permit and Limited Quantity Hauling Exemption from the California Department of Public Health, Medical Waste Management Branch. A copy of this permit can be obtained from the Safety Department.

Waste and Disposal
All medical waste is treated and disposed off-campus by a California licensed medical waste disposal contractor. The contract is administered, maintained and reviewed annually by the campus Office of Environment, Health and Safety in collaboration with representatives from the UCLA Health System.

Identification
The UCLA Health System generates the following types of medical waste as categorized in the California Medical Waste Management Act:

- <u>Biohazardous Blood Waste (red bag waste)</u>
  Biohazardous blood waste consists of waste contaminated with recognizable human blood, fluid human blood, fluid blood products, other body fluids, and containers or equipment containing fluid blood or fluids. It is generated in most patient care areas.

- <u>Sharps</u>
  Sharps include hypodermic needles, hypodermic needles with attached syringes, needles with attached tubing, blades, broken glass, acupuncture needles, and pipettes, whether or not contaminated with biohazardous or pharmaceutical material. They are generated from most patient care and clinical support areas.

- Human Anatomical Waste
  Human anatomical waste is generated from surgical and other interventional procedures which take place in designated, controlled areas. This waste category, which includes any recognizable human anatomical parts such as limbs, organs and larger tissue samples deemed not infectious, is considered pathological waste.

- Human Surgical Specimens
  Human surgical specimen waste is generated from (1) surgical and other interventional procedures, performed in both in- and out-patient areas, and (2) Pathology and Laboratory Medicine, Clinical Labs areas.

  Human surgical specimens or tissues, removed at surgery or autopsy, are considered potentially contaminated with infectious agents known to be contagious to humans. This includes cultures and stocks of infectious agents, live attenuated vaccines and dishes and devices used to culture infectious agents. They are considered pathological waste

- Pharmaceutical Waste
  Pharmaceutical waste is produced from most patient care and clinical support areas.

  Pharmaceutical waste includes, but is not limited to unused, partially used or expired prescription or over-the-counter medications (e.g. vials, tablets, capsules, powders, liquids, creams/ lotions, eye drops, suppositories), IV bags and tubing, full syringes, glass vials and ampules, narcotics and controlled substances in syringes, narcotic patches (cut in half), carpujets, and tubexes.

- Hazardous Pharmaceutical Waste
  RCRA hazardous pharmaceutical waste is produced in many of the patient care areas. Black containers that meet the EPA requirements for disposal of P, U and D-listed chemicals are placed in each area that generates hazardous pharmaceutical waste.

  RCRA hazardous pharmaceutical waste includes, but is not limited to, syringes, inhalers, tubexes or IV bags/piggybacks with residual (>5ml) of medication (i.e.: all cytotoxic drugs, cyclosporine, mycophenolate, oxytocin, coumadin, warfarin, epinephrine, and nitroglycerin tablets). This waste stream also includes items that may contain mercury, including vaccines, topical preparations, eye, ear and nose drops.

- Laboratory Waste:
  Human or animal specimen cultures from medical and pathological laboratories, cultures and stocks of infectious agents, live attenuated vaccines, and dishes and devices used to culture infectious agents.

- Chemotherapeutic Waste
  Chemotherapeutic waste is a product of oncology patient care activities. It's generated from and managed by dedicated inpatient units, outpatient clinics and Pharmacy.

Chemo waste consists of materials which previously contained or had contact with chemotherapeutic agents including tubing, empty bags, bottles, vials, syringes, gloves, masks, gowns and wipes. In addition, any materials used to clean up spills or otherwise contaminated through incidental contact.

Containers which previously held chemo agents are considered empty if (1) the liquid residue can no longer be poured or, (2) the solid material can no longer be removed by scraping.

- Bulk Chemotherapeutic Waste
  Unused or bulk chemo waste is returned to the Pharmacy. EVS collects the bulk chemo waste and it is processed separately from trace chemo waste for disposal as hazardous chemical waste.

- Mixed Waste – Medical Waste, mixed with Hazardous Chemicals
  Medical waste mixed with hazardous chemicals is generated primarily in Pathology and Laboratory Medicine areas from activities associated with tissue fixing and preservation. The chemicals are usually solvents such as alcohol and xylenes, or formalin.

  This waste is maintained within and under the control of Pathology and Laboratory Medicine. Once designated as waste, it is segregated and stored in a specified, posted area. All containers are labeled accordingly.

  Before this type of medical waste is disposed, the chemical is decanted off by a licensed hazardous waste contractor.

- Mixed Waste - Radioactive Materials, Contaminated with
  Medical waste contaminated with radioactive materials may be generated from any patient care area, originating from patients who recently underwent nuclear medicine procedures, either inpatient or outpatient.

  This type of mixed waste usually is usually in the form of excrement or materials which have had contact with excrement, from these patients. It is identified as waste when (1) initially generated or (2) (WW only) at the loading dock when passed through a mounted radiation detector.

  Either way, radioactive medical waste is segregated and stored in a placed in a designated, secure area and monitored until the activity level drops below threshold, at which point the waste re-enters the medical waste stream.

- Isolation Waste:
  Waste contaminated with the excretion or secretion from patients isolated with highly communicable diseases.

Inventory

Medical waste generation reports are prepared monthly by Environmental Services utilizing data provided by the medical waste disposal contractor. Reports include the amount of biohazardous (autoclave and incinerate), pathological (incinerate), and chemotherapeutic (incinerated) waste generated. Environmental Services and the Safety Department review

these reports and present significant issues to the Environment of Care Committee or the Infection Control Committee.

Spills
Only staff members who are trained to competency regarding proper procedures, who have the appropriate cleanup materials, and who have the appropriate personal protective equipment, are allowed to clean up blood and other potentially infectious materials. Department heads are responsible for ensuring that staff has been trained regarding spill response procedures for biological materials to which they may be exposed.

Reference policy HS8206, “Biohazardous Materials Spill or Release,” for detailed procedures.

Exposure
Exposure remediation and response procedures and protocol are presented in Infection Control Policy C006 “Exposure Control Plan for Bloodborne Pathogens”.

Surveillance reports are regularly reported to the Infection Control Committee and forwarded to the Medical Staff Executive Committee through committee minutes.

Exposure reporting, evaluating and record maintenance procedures are presented in Infection Control Policy C006, “Exposure Control Plan for Bloodborne Pathogens”. This policy is maintained by Infection Control and reviewed by the Infection Control Committee every three years.

Orientation/Education
Department Heads are responsible for ensuring that their employees are trained and competent regarding infection control procedures as it pertains to the materials and areas to which they may be exposed.

All staff receive infection control education, including principles of epidemiology, disease transmission, and isolation, during New Employee Orientation and then annually, thereafter. Alternatively, staff may read an Infection Control module and take the post-test to satisfy the annual training requirement. A perfect score is considered passing. Wrong answers are corrected and reviewed with the employee.

Every employee is given annual department-specific safety training, which includes an infection control component, if appropriate. In addition, specific job or area-specific training may be given more frequently to address infection control issues associated with the introduction of new processes or procedures.

Policies
Policies related to Biological and Chemotherapeutic Waste include:

Environment of Care:
- Bio-Hazardous Materials Spill or Release
- UCLA Health System Medical Waste Management Plan
- Exposure Control Plan for Bloodborne Pathogens, C006

Radioactive Materials

The UCLA Health System adheres to the policies established in the UCLA Radiation Protection Manual. This manual outlines responsibilities and authorities, quality assurance, radiation protection standards, management of radioactive materials, human medical use of radiation, the management of radiation producing machines, safeguards, personal monitoring, surveillance, and radioactive waste management.

This Manual, required in order for UCLA to possess a Broad Scope, Type A, Radioactive Material License with the California Department of Public Health, is the principal document governing radiation use at UCLA. All other policies and practices regarding radioactive materials are considered derivatives of this Manual.

Selection – Overview

The selection process for radioactive materials includes the following:

- Planning Isotope Use: assessment and review of physical controls, training, quantities and chemical forms, environmental considerations, waste management, decommissioning, lead time, and paperwork control.

- Authorization for Use of Isotopes: application for isotope project approval, required information, Radiation Safety Office review, project approval, authorization periods, and project authorization amendments.

- Approval by the Radiation Safety Committee: UCLA Health System representation includes Nuclear Medicine, Radiation Oncology, Radiology, Safety Departments

- Acquisition of Radioactive Material

The Radiation Safety Committee reviews and approves all proposals which involve work with radioactive materials. Most of the authorization process is delegated to the campus Radiation Safety Office.

Processes and procedures pertaining to the selection of radioactive materials are presented in the Radiation Protection Manual, Chapter V., “Management of Radioactive Materials.”

Handling, Use and Storage

Handling and use protocol for radioactive materials are presented in the Radiation Protection Manual. In addition, the campus Radiation Safety Office may be consulted.

Waste and Disposal

The Campus Radiation Safety Office manages the Radioactive Waste Management Program. This program includes:

- Management and Segregation: segregation of dry waste, disposal of packing materials, labeling, containers, collection, intramural transport

- Handling and Control by Radiation Safety Office

- Volume Reduction

Processes and procedures pertaining to the disposal of radioactive waste are presented in the Radiation Protection Manual, Chapter XI., “Radioactive Waste.”

Identification, Evaluation, Inventory
The identification, evaluation, and inventory requirements relevant to radioactive materials and waste are presented throughout the Radiation Protection Manual.

Radioactive Material Spills
Only staff members who are knowledgeable, trained and experienced regarding cleanup procedures, and have the appropriate cleanup supplies and personal protective equipment are allowed to clean up a radioactive material spill.

Reference policy HS8209, “Radioactive Material Spills, Releases and Exposures”, or the campus Radiation Protection Manual, for detailed procedures.

All spills must be reported to Radiation Safety. Reporting, investigating, remediation and response procedures and processes are presented in the Radiation Safety Manual.

Radioactive Material Exposures
Staff who have potentially or positively been inappropriately exposed to radiation or radioactive materials must follow the procedures provided in the “Radioactive Material Spills, Releases and Exposures” policy or the Radiation Protection Manual.

All exposures must be reported to Radiation Safety. Reporting, investigating, remediation and response procedures are presented in the Radiation Safety Manual.

Orientation/Education
The campus Radiation Safety Office requires that any individual working in a radiation environment attend an annual training session, read the Radiation Protection Manual, and pass a test prior to their job assignment.

Radiation safety training is not intended to develop radiation safety experts, but to provide guidance to avoid unnecessary radiation exposure and advise staff of the associated risks.

The UCLA Radiation Safety Training Program satisfies regulatory requirements pertaining to the use of radioactive materials. Both new and established medical uses in various diagnostic studies and therapeutic procedures are considered. The training program recognizes that the level of training required depends on the extent of the employees’ involvement with radiation and radioactive material.

The campus Radiation Safety Office manages the Radiation Safety Training Program. This program includes the following:

- Identification of Personnel Requiring Training
- General Criteria for Training and Specific Topics
- Multilevel Training
- Identification of Essential Elements of Training Curriculum

Additional information regarding radiation safety training is presented in the Radiation Protection Manual.

Policies
The UCLA Radiation Protection Manual presents policies related to Radioactive Materials use to which the hospital adheres.

Compressed Gases

Compressed gases are managed, used, transported, and stored in compliance with California Occupational Safety and Health Administration (CalOSHA), National Fire Protection Association (NFPA) and other applicable regulations and standards to ensure the safety of staff, patients and visitors.

Management
Compressed gases are managed by Materials Management, Health System Facilities and Respiratory Therapy.

Materials Management
Materials Management is responsible for management of E-cylinder oxygen tanks for patient use throughout the hospital. This includes inventory management, storage, distribution, and return of empty cylinders.

Respiratory Therapy
Respiratory Therapy is responsible for the management of compressed gases for use with ventilators and other equipment utilized by respiratory therapists and other clinical staff. This includes inventory management, storage, utilization, and return of empty cylinders. The following gases are managed by Respiratory Therapy:

- Oxygen: H-, E-, D- cylinders
- Air: H-, E- cylinders
- Nitrogen: H-, E- cylinders
- Heliox: H- cylinders
- Carbogen: H- cylinders
- Nitric oxide: D-, M- cylinders

Health System Facilities
Health System Facilities is responsible for the management of H-cylinders connected to the distribution system that serves the Main Operating Room, including oxygen, nitrous oxide and nitrogen. In addition, Health System Facilities oversees the bulk storage oxygen tank and piped gas system that provides gas to the bedside.

Patient Escort
Patient Escort provides oxygen for patients undergoing transport and ensures local stock supply levels are maintained.

Inventory
The Safety Department maintains a listing of hazardous chemicals and gases bulk storage locations in compliance with the Chemical Inventory and Business Plan requirements in the California Health and Safety Code, California Code of Regulations, Titles 19 and 24 and the Los Angeles Certified Unified Program Agency (CUPA).

This inventory is available to assist emergency responders with planning and response efforts associated with emergency events involving hazardous materials within hospital facilities.

This inventory is reviewed and updated periodically, including during construction and department moves.

(Note: The CUPA inventory is to be updated by the Summer 2013.)

Storage and Transport
Cylinders are securely stored and safely transported in compliance with applicable regulations and good safety practice, as presented in Policy HS 8212, "Compressed Gas Cylinder Transport, Storage and Use".

Disposal
Empty or partially used compressed gas cylinders are collected, stored and transported in the same manner as full cylinders. Cylinders are returned to the vendor for reuse.

Hazardous Gases, Vapors, Fumes

Potentially hazardous gases utilized or generated within the UCLA Health System include:

- Organic solvents: Clinical Labs
- Formaldehyde: Clinical Labs, Pathology
- Cauterizer fume: Operating Rooms
- Welding: Construction, maintenance

Exposure Control
The primary method for controlling potential exposure to hazardous gases, vapors and fumes is with engineering and ventilation controls such as fume hoods, slot hoods, and scavenger units. The necessity for engineering controls is determined by regulatory mandate or after consultation with the Safety Department (chemical, biological, compressed gases), Infection Control (biological), or the campus Radiation Safety Division (radioactive).

Secondarily, personal protective equipment (i.e. respirators) is provided for staff to maximize their protection. Respirators are issues in accordance with policy # HS8009, "Respiratory Protection".

Monitoring
Representative environmental air monitoring is conducted to assess airborne levels and determine potential staff exposure. Area and personal monitoring may be conducted for this purpose. Air monitoring assists with evaluating the effectiveness of engineering controls and ensuring compliance with threshold limit values and permissible exposure levels.

Air monitoring is conducted and samples are analyzed in accordance with guidelines published by the National Institute of Occupational Safety and Health (NIOSH) and the California Occupational Safety and Health Administration (CalOSHA). The Safety Department is responsible for the environmental air monitoring program.

Electronic Waste

Electronic waste such as computer hard drives and monitors are disposed of as hazardous waste if the equipment or its components cannot be reused or recycled. Prior to disposal, all memory is erased from the computer. E-waste is staged in a locked cage in the Med Plaza 200 parking structure, then brought to the Michigan Operations Center on a regular basis. An electronic waste vendor picks up e-waste from the MOC as scheduled by the Safety Department.

Batteries are collected as a separate waste stream and sent to a contract facility for recycling.

Hazardous Energy Sources

Lasers are the primary hazardous energy source within the Health System. The Laser Safety Committee oversees laser safety and use issues including the policy

The Clinical Engineering department, who services the lasers, maintains a complete inventory. Laser user departments each have a laser safety officer or nurse responsible for ensuring staff compliance with the Laser Safety Policy, #HS8008.

Environmental Monitoring

The Safety Department (chemicals), Hospital Epidemiology (biohazardous), and the campus Radiation Safety Division (radioactive) conduct area and personal air sampling in compliance with applicable regulations and in response to employee concerns. Air monitoring results are used to document compliance and to suggest engineering or other control measures. Air monitoring results are made available to employees as required by the California Code of Regulations, Title 8, Section 3203.

Incident Reporting

The on-line Event Reporting System is the primary method by which staff report a wide variety of incidents, events or unsafe conditions. This system, available to staff internally on-line, forwards reports to appropriate managers responsible for the type of event, situation or area. Reports are sent to multiple people within the institution to ensure a multi-disciplinary and comprehensive approach to resolving issues.

The on-line Event Reporting System provides tracking and trending information and facilitates analyses of a wide variety of categories of events relevant to the Environment of Care to help identify potential risk and opportunities for improvement.

Environmental Rounds

The Health System takes a proactive approach to the identification and abatement of hazards found in the environment of care. Environmental Rounds is the primary formal process by which risk is assessed to identify potential hazards posed by the buildings, grounds, equipment, occupants and physical systems that may affect patients, staff and visitors. These Rounds assess departmental compliance with Environment of Care Program

requirements and identify potentially hazardous conditions. Regulatory compliance is also assessed.

Environmental Rounds are conducted every six months in patient service areas and annually in all other areas. The Environment of Care Functional Team coordinates rounds.
The Environmental Rounds team is empowered and expected to take immediate remedial action against any condition that poses an immediate threat to life, health, property or equipment.

The Environmental Rounds Team consists of members of the Environment of Care Committee.

Equipment Procurement

Equipment intended to minimize the exposure to, or release of, hazardous materials is selected and procured by individual departments based on an assessment of potential risks. The Safety Department may be consulted.

Space Allocation

Space allocation issues related to the use of hazardous materials may be addressed at the department or institutional level. Space is provided as needed to ensure safety and comply with applicable regulations.

Performance Standards and Performance Improvement

Performance Monitors

The Environment of Care Committee (ECC) is responsible for tracking select performance monitors for Hazardous Materials and Waste. Data and significant events, findings and trends are reported to the ECC at least annually to identify potential risk and possible opportunities for improvement. Upon approval, the reports become part of the Committee's minutes and are submitted to Administration for review.

Other hazardous materials and waste monitors may be tracked by the Safety Department independent from the EC Committee. The EC Committee is consulted and informed regarding significant issues or problems.

Performance Monitors for 2013 are as follows:

- Environmental Rounds results (twice annually)
- Staff Interview results (twice annually)
- Hazardous materials spills and releases (as occur)
- Hazardous materials exposures (as occur)
- Relevant regulatory agency activities (as occur)
- Respiratory Protection program improvements including medical clearance, initial and annual fit testing. (quarterly)

Performance Improvement
Performance improvement initiatives are generated from risk assessments, analyses of performance monitoring activities and staff and manager observations and feedback. The primary goal is to provide a safer environment for staff, patients and visitors.

Performance improvement projects' selection criteria include their ability to be easily measured, their relevance and statistical validity. They are also based on risk analysis, quality and effectiveness issues, customer satisfaction, productivity and financial considerations, and regulatory compliance.

The process for obtaining measurement data must be reproducible. Reproducible measurement techniques result in advances in quality, productivity, customer satisfaction, cost containment and safety.

A threshold level is attached to every performance improvement project. The threshold is the acceptable minimum level of frequency or occurrence. Should an indicator fall below that threshold, the following actions occur:

- An investigation is conducted to determine possible reasons for failure to meet or sustain threshold.
- Based on the findings, a plan for corrective action is developed and implemented.
- The standard continues to be monitored to determine if corrective actions were effective in re-establishing threshold. If not, the process is repeated.

Each PI indicator is measured on a routine and ongoing basis. If the indicator is an event, then the indicator is measured at each occurrence. If the indicator is monitored consistently over time, then the measurement takes the form of a trend analysis.

Performance improvement initiatives for 2013 are as follows:

- Improve staff knowledge regarding hazardous materials (hazmat spills and PPE).
- Maintain universal waste recycling levels: batteries
- Increase universal waste recycling levels: fluorescent light tubes
- Decrease RCRA waste by 25%

Annual Evaluation

The Hazardous Materials and Waste Management Plan is reviewed and evaluated annually by the Safety Department. The purpose of this evaluation is to determine the degree to which actions taken during the previous year were effective in meeting the goals and objectives of the Plan.

This Plan, related plans and policies are also evaluated after events that involve hazardous materials. Plan and policy improvements reflect institutional experiences, regulatory changes or routine reviews of response protocol.

The evaluation also provides a mechanism to determine opportunities for improvement for the next year. This determination forms the basis for setting goals and performance improvement standards for the future.

The following mechanism is utilized when conducting the annual evaluation.

- The objectives, scope, performance and effectiveness of the Hazardous Materials and Waste Management Plan are reviewed to determine if they remain current with the mission and strategic plan of the UCLA Health System and applicable regulations.

- The extent to which goals were obtained for the prior year is also analyzed. The actions taken to achieve these goals are reviewed to assess their effectiveness. The data for this analysis derives from information supplied to the Environment of Care Committee as part of its information collection and evaluation function, along with discussions with staff and record reviews.

- Opportunities to improve the effectiveness of the Plan are identified during the review and evaluation process. Goals are then established for the coming year, along with recommendations for implementing processes necessary to achieve those goals.

- Performance Monitors are reviewed to determine if modifications are necessary in response to the evaluation and established goals.

- Regulations are reviewed to include updates and changes from the DOT, EPA, DHS and Cal/OSHA.

- A DTSC Biennial Hazardous Waste Report is to be submitted every other calendar year. The next report will be submitted in March 2014.

The Annual Evaluation and the Trends, Accomplishments and Goals are submitted first to the Environment of Care Committee and then to the Performance Improvement and Patient Safety (PIPS) Committees (MC and RNPH) and the RNPH Clinical Coordinating Committee. The Annual Evaluation and a Trends, Accomplishments and Goals executive summary are also presented to Senior Leadership.

The goals and implementation processes outlined for the next year are reviewed, revised as necessary, and approved by each Committee.

Policy Management

Hazardous materials and waste policies are reviewed at least every three years and after events that involve hazardous materials.

Newly revised policies are sent in draft form to the Environment of Care Committee for review and approval. Once approved, they are sent to the Policy Committee and possibly to the Medical Staff Executive Committee for final review.

Policies are available to staff on the Health System policy website.

Management Plan Responsibility

The Safety Department is responsible for maintaining and implementing the Hazardous Materials and Waste Management Plan and Program.