**HLAC Standards**

**BASIC ELEMENTS**

1. **Textile Control Procedures**
2. **Laundry Facilities**

* Physical design, ventilation, fixtures and signage
  + Processing of soiled textiles flows to clean textiles, physical layout and maintenance procedures shall ensure efficiency, minimize environmental contamination, and protect the material and hygienic integrity of the processed textiles
  + Soiled textiles area
    - Facility design must have separation of areas that receive, store, or process soiled textiles from areas that process, handle or store clean textiles
      * Physical Barrier (barrier wall) which includes positive air flow from the clean to the soiled and vents directly outside
      * Functional Barrier by utilizing positive air flow from the clean to the soiled and vents directly outside
    - The physical design/layout of the soiled sorting shall be designed to permit orderly soiled sorting and other processes
    - Signs warning about presence of contaminated textiles and the need to follow **Universal Precautions** must be posted in work and storage areas where potentially contaminated textiles are stored and processed
    - Hand washing facilities must be located in all areas where soiled or contaminated textiles are handled
    - Emergency eyewash equipment must be available with unobstructed access (w/in 10 sec) in all areas where soiled textiles are processed
  + Clean Textile staging and storing areas
    - Staging and storage areas must comply with following spec
      * Free of vermin
      * Devoid of lint
      * Without obvious moisture contamination
    - Ventilation of staging /storage areas shall
      * Be designed to prevent accumulation of dust and lint
      * Be under positive air pressure, thereby preventing contamination from soiled areas
    - Policies and protocols should reflect a facility-specific strategy for ensuring the hygienically clean quality of the stored, processed textiles and should include the following
      * Schedule of visual inspection of stored textiles and recording of observations.
      * Remediation plan in response to customer returned, moist textiles
    - Spec for clean textile storage shelving
      * Shelves will be placed approx. 2 inches from the wall to safeguard package integrity
      * The bottom shelf will be free from visible soil and at a minimum of 8 inches from the floor for accessible cleaning and shall be of solid non porous construction
      * Top shelf shall be a minimum of 18 inches below the ceiling to prevent the impairment of ventilation, sprinklers, and lighting
      * Cardboard must not be used as shelf liner in clean textile storage
  + Other fixtures and signage
    - Hand hygiene resources must be available in or around all work areas and personnel support areas
    - Emergency eyewash/shower equipment must be available with unobstructed access (w/in 10 sec.) for immediate emergency use in all areas where chemicals are used and stored
    - Safety features (emergency lighting, signage, fire alarms, door accessibility, etc..) must be evident and operational to safeguard persons and personnel
* Physical plant and equipment maintenance
  + Maintenance of equipment and spaces in laundry processing healthcare textiles will follow documented providers policies and procedures
  + Cleaning, decontamination and disinfection
    - Physical environment shall receive, per policy, scheduled cleaning based on the surface, level of contamination, operation performed
      * Cleaning schedule will be maintained current and posted for inspection
    - Environmental surfaces subjected to periodic blow down from ceiling downward to minimize lint/dust buildup
      * Performed when no other processing is occurring
    - Working surfaces must be kept clean of soil dust and lint with cleaner/water
    - Working surfaces contaminated with blood or OPIM must be decontaminated, cleaned and disinfected
      * Must use EPA registered hospital disinfectant labeled tuberculocidal or listed on EPA list D and or E with label claims for HIV/HBV according to label instructions
    - Working surfaces contaminated with body substances other than blood or OPIM must be decontaminated, cleaned and disinfected with EPA registered hospital disinfectant according to label instructions
    - contaminated work surfaces must be decontaminated, cleaned and disinfected with EPA registered hospital disinfectant according to label instructions after completion of soiled textile handling
      * Immediately or ASAP when visibly contaminated
      * At the end of the shift if contamination may have occurred since last cleaning
    - Work practices when using commercial washer extractors
      * Cleaning and disinfection
        + Surfaces used to both load and unload must be non porous and easily cleaned
        + Cleaning and disinfection of surfaces used to both load and unload must be consistent with principles of functional separation
        + Spot cleaning of visible soiled surfaces used to both load and unload washer extractors must be done asap after contamination

Use appropriate disinfectant for type of soil

* + - Work flow and functional separation
      * Functional and physical separation of soiled and clean textiles must be followed
      * If using a sling delivery system, clean textiles must not be stored under slings
    - Hand washing and PPE must be in accordance w/ Part I, sub.5, sect. 5.3 and 5.4, statements 5.3.3.1 and 5.4.1.4 of HLAC standard
  + Pest control program
    - Must have documented current IPM (integrated pest management) program consistent with healthcare practices
  + Management of foreign items and regulated wastes
    - Misc foreign items
      * Follow customer policy for returning items found
      * Especially if personal information is involved
    - Regulated medical waste management
      * Written plan/agreement with customer detailing procedures for biohazard handling
        + Must be in accordance with local regulations or the authority having jurisdiction (AHJ)
        + Documentation must be available for review
        + Appropriate containers must be used (sharps, etc)
    - Hazardous materials and pharmaceutical waste management
      * Compliance limited to those with affirmed experience with customers that send textiles contaminated with hazardous substances for laundering
      * Must be handled according to federal regulations
      * Provider will reject items contaminated if customer fails to adhere to proper waste management practices
      * Provider – customer policy and procedures for hazardous materials and pharmaceutical waste management shall include indication that issue has been addressed
        + Provider and customer must establish a mutually agreeable course of action for addressing management of contaminated textiles (discard, etc..)
* Piped air, water, wastewater, and chemicals management
  + Facility documents must contain compliance with local or AHJ as they pertain to air, water and chemical management
  + Must be evidence of waste water/air quality compliance if applicable
  + Compliance with hazardous chemical regulation, CSAT, and local must be documented and available for review

1. **Contingency Planning**

* Plan for uninterrupted operations service in case of
  + Loss of utilities
  + Medical emergencies
  + Natural or man made disaster
  + Fire
  + Inclement weather
  + Work stoppage
  + Major accidents
* Contingency plan to include
  + Plant & transportation contingency protocol
    - Step by step procedure in case of an emergency & be available to supervisors
    - Workers need to be familiar with major elements of contingency
  + Call chain
    - Written, complete, current, and available to personnel
    - Maintained by designated person. Update at annually or when changes occur
  + List of backup laundry facilities
    - Written agreement in place with one or more alternative laundry provider that can cover full volume
    - Update annually -signed & dated
  + Backup source of textiles
    - Written agreement in place for alternate textile suppliers

1. **Laundry Equipment**

* Documentation
* List of all equipment kept on file
* Occupancy permit kept on file if available
* Documentation concerning safety equipment
  + Provider to verify that manufacturer has provided safety instructions& potential hazards associated with equipment use.
  + Provider to provide documentation to ensure that equipment incorporates appropriate safeguards..
  + Provider to demonstrate equipment complies with ANSI safe equipment operation & maintenance
* Documentation concerning equipment maintenance
  + Maintenance personnel should have access to equipment manuals
  + Provider should retail evidence of ongoing maintenance program including work orders & current inspection tag
  + Preventive maintenance should be documented and kept on file
* Installation & Utility connections
  + Equipment installation should involve trained qualified installers appropriate utilities & support services compliance with manufacturers instructions and functioning safety equipment specified by manufacturer
  + Before any piece of equipment is commissioned into service or after maintenance or repair it should be verified that performance meets manufacturer specs
  + Machinery connected to utilities shall appear to be properly installed and operating correctly
    - Providers shall ensure safe and correct connection of any piece of equipment to utilities as appropriate and that the connection includes proper controls for incoming utilities
    - Electrical power supplied to processing equipment shall be installed in conformance with local electrical and fire codes to prevent fires.
    - The gas supply shall conform to the equipment manufacturer’s specs
    - **The connection of equipment to gas line must be done by a licensed person authorized by state regs to perform this function**
    - Steam supply and its quality shall conform to the equipment manufacturers recommendations and any state regs
  + Water quality
    - The provider should determine whether pretreatment of water to be used for processing is needed, the appropriate type of pretreatment, compatibility between pretreatment and chemicals to be used in processing and local wastewater disposal guidelines.
    - The provider should consider softening their water when hardness is 2 grains/gallon or higher
  + Equipment Operation
    - The commercial equipment shall be appropriate for laundry operations
    - The proper functioning of equipment shall involve correct utilities, mechanical systems automated controls and support systems according to manufacturers specs
    - Mechanical system should function according to manufacturer specs including but not limited to valve openings and closures, water level in inches for each level setting. Tilting for loading and unloading, temperature sensor design, correct operational safety features, and speed and direction of drum rotation.
    - Automated controls should be verified, calibrated, and checked at least annually
    - The performance of chemical delivery system should be checked at least monthly by verifying delivery rates or conducting chemical titrations.
    - The design of size of water heater equipment should be appropriate for providers needs at peak operating times and in order to maintain the specified heater water temps at desired cycle.
  + Preventive Maintenance
    - Equipment shall be inspected cleaned and receive scheduled preventive according to manufacturers instructions or according to facility policy and procedures if instructions are not available.
    - Preventive maintenance shall include replacement of worn expendable parts lubrication and calibrations
  + Equipment calibration
    - Equipment should be calibrated periodically as specified in the manufacturer’s instruction manual or as determined by facility policy and procedures if not available.
    - Calibration should be performed by personnel trained and or certified in calibration specified by the manufacturer
  + Repiars
    - Worn malfunctioning or broken parts should be replaced promptly by qualified personnel
    - **Safety precautions including lock out/tag out procedures must be observed.**
  + Record keeping for new existing and/or used equipment
    - Maintenance record shall be kept on file for each piece of equipment
    - The following information shall be recorded
      * Service details
      * Equipment details
      * Parts and repair details
      * Personnel involved

1. **Laundry Personnel**
2. **Laundry Customers**
3. **Quality Assessment**

**THE TEXTILE PROCESSING CYCLE**

1. **Handling, Collection, and transportation of soiled healthcare textiles**

* Universal Precautions
  + All soiled healthcare textiles must be assumed contaminated
  + Apply to all personnel that handle soiled textiles during moving, containing, loading, unloading, and sorting
* Handling and collection
  + All healthcare textiles must be handled and collected in accordance with federal and local regulations or those of the AHJ, therefore minimizing exposure to blood borne pathogens or other infectious agents
  + Handled and collected with minimal agitation at all times to prevent contamination of air, surfaces, persons etc..
* Soiled textile containment for laundries not using universal precautions
  + Collection bags or containers
    - Providers must stipulate in contract that customers
      * must select soiled textile containment that will contain wet and soiled textiles, preventing contamination to environment during collection, transport, and storage
      * must utilize soiled containment that will not tear when loaded to capacity, and close securely
      * must use containment labeling and or color coding
        + must ensure soiled textiles are placed and transported in containers that are specially labeled or coded to distinguish them from uncontaminated laundry when releasing both types for pick-up
    - Provider must ensure that personnel are trained to recognize labeling/color coding and distinguish them from uncontaminated laundry
  + Textiles contaminated with hazardous substance must be placed in specially marked containers, then placed in labeled impervious containers that prevent soak through or leakage
  + Reusable collection containers
    - Must withstand repeated decontamination
    - Must be appropriately identified (labeled)
* Transportation
  + Provider must maintain functional separation of soiled/ clean textiles in carts and or vehicles at all times during collection, transport and handling
  + functional separation must be maintained by
    - bagging soiled textiles in fluid resistant containers
    - anchoring soiled containers in vehicle to prevent spillage from container
    - training personnel on proper bagging and placement of textiles in transporting vehicle
    - ensure all personnel with this responsibility follow universal precaution when necessary
* Carts used for soiled textiles
  + Carts, containers, covers and liners used to collect or transport soiled textiles must be cleaned and disinfected after emptied and before any next use clean or soiled
  + If state regulation or AHJ indicates carts used for soiled cannot be subsequently used to transport clean, must comply
  + Proper cleaning should include any of the following
    - Steam cleaning
    - Detergent and water
    - Using EPA hospital grade detergent/ disinfectant
      * EPA registered products must be used according to label instructions, and on surface for full contact time

1. **Sorting**

* **Surfaces must be cleaned & disinfected**
* **All employees who handle soiled textiles must follow universal precautions & use appropriate PPE for task**
* Soiled textiles sorted by wash load classifications or type of goods
* **Laundry bags with contaminated hazardous materials must be prewashed & textiles added in 2nd wash**
* Foreign objects removed during sort process should be returned to customer if applicable
* Surgical instruments placed in separate designated container & returned to customer
* Disposable instruments placed in separate designated container & returned to customer
* Patient info found should be placed in separate designated container & returned to customer
* **Written sharps policy that includes**
  + **Sharps containers-closeable puncture resistant, leak proof on sides & bottom, & labeled or color coded**
  + **Must be located near soiled sorting area**
  + **Personnel injured by sharps must follow OSHA’s res on injury documentation, post exposure evaluation, & follow up.**

1. **Washing & Extracting**

* Document equipment requirements in processing healthcare textiles
* Follow fabric care instructions to insure hygienically clean textiles
* Healthcare textiles should be only washed with other healthcare textiles (not mop heads, mats)
* Load size should be established and recorded for each load processed
  + Equipment manufacturers should be consulted when configuring load size
* Established standards for
  + Cycle time
  + Water level/usage
  + Temperature
  + Chemical usage
* **Demonstrate that wash process are in compliance with state & local requirements (look at this one in standards book)**
* If soiled textiles received are labeled hazardous materials
  + Pre-wash contaminated textiles in washable laundry bag separate from other textiles
  + Second wash process with other soiled textiles prior to drying
* Extract textiles in manner that preserves integrity of textiles minimizes microbial growth after washing, & prepares textiles for efficient ironing/folding
* Damp textiles should not be inappropriately stored as this facilitates microbial growth

1. **Drying**

* Dryers in good operating condition
* Drying procedures shall be described, controlled, monitored for each textile classification to ensure proper drying
* Hot loads subjected to cool down before handled by employees & minimize wrinkling

1. **Finishing**

* Ironers should be maintained in good working condition so they adequately iron, dry, fold without excessive heat or mechanical damage
* Temp appropriate for fabric & based on manufacturer recommendations
* Documentation of monthly temps & preventive maintenance
* Folding & stacking procedure shall ensure that the textiles maintain the same hygienically clean state achieved from washing
* Folding/stacking procedures meet the needs of customer
* If textiles become soiled in the folding process the textiles shall be rewashed
* Healthcare textiles shall be preserved in a hygienically clean state for delivery to customer
* Textiles to be wrapped in fluid resistant bundles or placed unwrapped into fluid resistant covered carts or hampers
  + Wrapping material should be plastic or other material that will protect from soiling or contamination
  + Cart shall be securely closed during transport to customer
* If any textiles become soiled during any stage of finishing processing they must be rewashed and reprocessed

1. **Storage**

* Storage methods shall preserve textiles in hygienically clean state for delivery
* Stock shall be rotated in first in/first out
* Unwrapped textiles shall be storedin designated storage rooms, areas, or carts
  + Only clean textiles shall be stored in area posted “Textile Storage Room”
  + Storage area/room cleanliness
    - Schedule of surface cleaning area
    - If disinfection required use EPA registered hospital disinfectant
  + Storage area entry & exit
    - Door to remained closed at all times except for exit/entrance
    - Accessible by authorized personnel
  + If unwrapped textiles are placed on cart they shall remain covered at all times until they reach customers designated location
  + **If cart does not have solid bottom it must be lined with hygienically clean barrier that prevents environmental contamination before placing clean textiles in it.**
  + **If textiles become soiled during storage they must be rewashed and reprocessed**

1. **Delivery of cleaned healthcare textiles**

* Rationale
  + Clean healthcare textiles must be transported, delivered and stored by methods designed to minimize microbial contamination from surface contact or airborne deposition
* Delivery methods
  + Clean linen shall be transported in containers used exclusively for this purpose and or but not limited to the following
    - Clean textiles shall be in a hamper lined with a clean liner
      * Hamper is to be covered or liner closed to protect contents
    - Clean textiles will be placed in a cart, with a clean, secured cover
      * When the cart contains clean textiles, the textiles will be wrapped inside the cart
      * If the clean textiles are not wrapped inside the cart, the bottom of the cart must be lined with a hygienically clean barrier preventing environmental contamination and securely covered
    - Clean textiles shall be place on a wire rack and suitably covered
  + Clean textiles will be wrapped for delivery
* Cart function and cleanliness
  + Carts will be maintained well with wheels free rolling and clean
  + Cleanliness
    - Carts shall be cleaned in accordance with guidelines set forth in section related to soiled textile carts
      * Proper cleaning should include any of the following
        + Steam cleaning
        + Detergent and water
        + Using EPA hospital grade detergent/ disinfectant
        + EPA registered products must be used according to label instructions, and on surface for full contact time
    - Carts containers reusable covers and liners used fro clean textiles will be cleaned and disinfected after cart is emptied and returns to facility
    - Reusable cover materials (liners, covers, etc..) must be washed before the next use
    - If a cart used to transport clean textiles appears soiled, it must be cleaned and disinfected before next use
* Vehicle considerations
  + Functional separation
    - Clean and soiled textiles transported in the same vehicle must have proper and effective functional separation maintained
    - Separation will be achieved through physical barriers, and or space separation sufficient to protect clean textiles from contact with soiled
  + Vehicle cleanliness
    - The interior of the cargo area shall be cleaned regularly per policy and procedure and whenever visibly soiled
    - If contaminated with blood or OPIM, must be decontaminated, cleaned and disinfected
      * Must use EPA registered hospital disinfectant labeled tuberculocidal or listed on EPA list D and or E with label claims for HIV/HBV according to label instructions
  + Occupational safety for drivers
    - Hand care
      * Must have waterless antibacterial hand cleaner on board
      * If visible soil is apparent, driver will use utility gloves to minimize contact with soiled textiles
      * Hand washing with soap and water must be done at the soonest opportunity upon glove removal
      * Must have PPE and spill kits on board for self protection while cleaning and disinfecting spills according to provider policy and procedure