

**Environment of Care Standard 3.10: The organization manages hazardous materials and waste risks**

**Element of Performance 3. Implementation of Hazardous Material and Hazardous Waste Program**

**The organization establishes and implements processes for selecting, handling, storing, transporting, using and disposing of hazardous materials and wastes from receipt or generation through use and/or final disposal, including managing the following: chemicals, chemotherapeutic materials, pharmaceuticals, radioactive materials and infectious and regulated medical waste including sharps.**

Evidence of Compliance	Evidence of Performance Improvement
<b>Hazardous Materials Management</b>	
<p>Purchasing:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Newly purchased hazardous materials added to inventory</li> </ul> <p>Handling, labeling, storage:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Facility maintains hazardous materials inventory listing all chemicals, locations</li> <li><input type="checkbox"/> Facility maintains MSDS management program.</li> <li><input type="checkbox"/> Hazardous materials labeled, stored, handled, used appropriately</li> <li><input type="checkbox"/> Personal protective equipment available, appropriate to hazards, maintained</li> <li><input type="checkbox"/> Staff can describe appropriate handling procedures and personal protective equipment</li> <li><input type="checkbox"/> Storage cabinets, rooms available for storage of flammable liquids, other hazardous chemicals</li> </ul> <p>Spills:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Spill clean up procedures in place in all areas where hazardous materials used, stored</li> <li><input type="checkbox"/> Spill clean up residues managed as hazardous waste</li> <li><input type="checkbox"/> Spills are reported to local authorities, National Response Center if necessary</li> <li><input type="checkbox"/> Spill control, decontamination equipment readily available</li> <li><input type="checkbox"/> Spill control equipment maintained in usable condition</li> <li><input type="checkbox"/> Eyewashes and showers (ANSI approved) are available, checked regularly</li> <li><input type="checkbox"/> Employees appropriately trained, response team members HAZWOPER trained</li> <li><input type="checkbox"/> Staff respond appropriately to spills of hazardous materials used in patient care</li> </ul> <p>Training:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Staff trained on hazards of materials used, appropriate handling, use of protective equipment</li> <li><input type="checkbox"/> Staff trained, competency tested in appropriate spill response for hazardous materials</li> <li><input type="checkbox"/> Documentation for all training kept for minimum 3 years</li> <li><input type="checkbox"/> Staff respond appropriately regarding use of hazardous material used in patient care</li> <li><input type="checkbox"/> Staff respond appropriately regarding spill of hazardous material used in patient care</li> <li><input type="checkbox"/> Staff respond appropriately regarding disposal of hazardous material used in patient care</li> </ul>	<p>Purchasing:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Purchasing policy promotes selection of less hazardous, environmentally preferable products</li> <li><input type="checkbox"/> Staff can describe environmentally preferable products in use</li> <li><input type="checkbox"/> Non-PVC equipment, to eliminate risks from DEHP, dioxin formation from incineration</li> <li><input type="checkbox"/> Staff trained to use less hazardous chemicals to reduce exposures, generate less waste</li> </ul> <p>Handling, labeling, storage:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Facility reuses personal protective equipment whenever possible (e.g., gowns)</li> </ul> <p>Spills:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Hazardous Material Spill Policy established, implemented</li> </ul> <p>Training:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Staff can describe hazmat elimination, substitution by less hazardous materials</li> <li><input type="checkbox"/> HazCom Training for new employees includes environmental improvement elements</li> <li><input type="checkbox"/> Waste prevention, proper waste handling in all employee job descriptions, by facility-wide policy</li> </ul>

**Evidence of Compliance****Evidence of Performance Improvement****Hazardous Waste Management**

## Recordkeeping and reporting:

- Facility has obtained EPA Identification Number
- Generator status determined, reviewed annually
- Basis for hazardous waste determinations documented
- Facility submits Biennial Reports on EPA Form 8700-13A each even numbered year
- Manifest copies managed properly, e.g. appropriate copies routed to regulatory authority
- Manifests, Biennial Reports, test results, analyses kept on site for a minimum three years
- Land Disposal Restriction notices kept for minimum three years
- Weekly HazMat inspections documented for leaks, corroded containers, other problems

## Hazardous waste determination:

- RCRA hazardous waste determination made for all solid waste being discarded
- Containers with hazardous materials completely emptied or managed as hazardous waste
- Containers that held P-listed wastes managed as hazardous waste
- Mixed wastes properly evaluated, disposed of

## Storage:

- Storage areas secure, operated to prevent releases to environment (e.g. secondary containment)
- HazWaste in non-leaking, sturdy, compatible containers, closed unless adding or removing waste
- Weekly HazWaste inspections documented for leaks, corroded containers, other problems
- Adequate aisle space maintained to ensure access to containers in event of spills or leaks
- HazWaste containers marked with the words "Hazardous Waste", descriptive name of waste
- Incompatible wastes segregated
- Precautions taken to prevent accidental ignition or reaction of ignitable or reactive waste

## Satellite accumulation:

- Containers located within immediate operator control, inspected daily
- Containers labeled with descriptive name of waste and words "Hazardous Waste"
- Full containers moved to HazWaste storage area within three days, marked with start date

## Spills:

- Spill clean up procedures in place in all areas where hazardous waste is handled, stored
- Spill clean up residues managed as hazardous waste
- Spills reported to local authorities, National Response Center if necessary
- Spill control, decontamination eqpt. readily available in areas where HazWaste handled, stored

## Purchasing:

- Recordkeeping and reporting:
- Facility moving to smaller quantity generator status by minimizing hazardous materials on site

## Hazardous waste determination:

- Facility minimizing hazardous waste generation to avoid making, documenting determinations

## Storage:

- Storage area clean, organized.
- Containers protected from weather, fire, physical damage, vandals.

Evidence of Compliance	Evidence of Performance Improvement
<b>Hazardous Waste Management Continued ...</b>	
<ul style="list-style-type: none"> <li><input type="checkbox"/> Spill control equipment maintained in usable condition</li> <li><input type="checkbox"/> Eyewashes, showers (ANSI approved) available, checked regularly.</li> <li><input type="checkbox"/> Employees appropriately trained, response team members HAZWOPER trained</li> </ul> <p>Disposal and Transportation:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Hazardous waste shipped offsite within appropriate timeframes based on generator status</li> <li><input type="checkbox"/> Determination of treatment requirements for land disposal of hazardous waste performed</li> <li><input type="checkbox"/> Hazardous waste shipped to facility permitted to handle the waste</li> <li><input type="checkbox"/> Hazardous waste shipped using hazardous waste manifest</li> <li><input type="checkbox"/> Waste properly marked, packaged for transportation</li> <li><input type="checkbox"/> Hazardous waste transport vehicle properly placarded if necessary</li> </ul> <p>Contingency Planning:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Contingency plan in place if facility is Large Quantity Generator</li> <li><input type="checkbox"/> Emergency coordinator designated, has authority to commit resources if necessary</li> <li><input type="checkbox"/> Provisions of contingency plan carried out immediately if there is fire, explosion, or release</li> <li><input type="checkbox"/> Emergency information posted near telephone in hazardous waste storage area</li> <li><input type="checkbox"/> Arrangements made with local authorities to respond to hazardous waste emergency</li> </ul> <p>Training:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Staff can describe appropriate response for hazardous waste spill</li> <li><input type="checkbox"/> Staff familiar with, competency tested in relevant waste ID, handling, emergency procedures</li> <li><input type="checkbox"/> Personnel trained regarding satellite accumulation</li> </ul>	<p>Training:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Staff reminded HazWaste never to be disposed of down drain or as solid or infectious waste</li> </ul>
<b>Nonhazardous Solid Waste</b>	
	<ul style="list-style-type: none"> <li><input type="checkbox"/> Facility promotes recycling all potential recyclable materials</li> <li><input type="checkbox"/> Bins clearly labeled, conveniently located throughout facility</li> <li><input type="checkbox"/> Facility chooses products with less packaging, using less materials (source reduction).</li> <li><input type="checkbox"/> Materials and equipment reused, reprocessed to greatest possible extent</li> <li><input type="checkbox"/> Food, organic waste composted</li> </ul>
<b>Regulated Medical Waste</b>	
<ul style="list-style-type: none"> <li><input type="checkbox"/> Bloodborne Pathogens (BBP) Exposure Control Plan in place</li> <li><input type="checkbox"/> Facility has done risk assessment to identify employee risks to BBP exposures, related risks</li> <li><input type="checkbox"/> Infectious waste properly segregated according to state-specific definitions.</li> </ul> <p>The facility's RMW segregation plan ensures that:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> RMW that includes chemotherapy waste identified, segregated</li> <li><input type="checkbox"/> RMW with chemotherapy waste products that are also HazWaste manifested, disposed of</li> <li><input type="checkbox"/> Infectious waste containers sturdy, labeled with universal biohazard symbol</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Signs to assist with proper segregation of infectious waste placed above containers</li> <li><input type="checkbox"/> Facility performs waste assessment, documents RMW generated per month</li> <li><input type="checkbox"/> Facility uses non-PVC IV bags, tubing, etc. to reduce dioxin emissions when incinerated</li> </ul> <p>Facility has developed, implemented comprehensive RMW minimization plan that provides for comprehensive staff training that includes:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> clear definitions of RMW</li> <li><input type="checkbox"/> plain language explanations of RMW disposal procedures</li> <li><input type="checkbox"/> guidance to identify hazardous chemicals, etc. and exclude from RMW waste stream</li> <li><input type="checkbox"/> comprehensive data collection and reporting</li> </ul>

Evidence of Compliance	Evidence of Performance Improvement
<b>Regulated Medical Waste Continued ...</b>	
<input type="checkbox"/> Staff trained, competency tested on proper segregation, disposal of infectious waste <input type="checkbox"/> Infectious waste containers stored onsite, secured, away from public, no longer than permitted <input type="checkbox"/> Infectious waste containers intended for transport properly packaged, marked <input type="checkbox"/> Waste placarded for transport, if necessary <input type="checkbox"/> Facility registered as generator of RMW with state, local authorities if required <input type="checkbox"/> RMW tracked, documentation kept per state rules  If RMW is incinerated or otherwise treated on site: <input type="checkbox"/> Incinerator is operated within permit parameters, records kept <input type="checkbox"/> Design capacity of the incinerator not exceeded <input type="checkbox"/> Hazardous waste not burned in the incinerator unless allowed by permit	and includes measures such as: <input type="checkbox"/> replacing disposal equipment with reusable equipment <input type="checkbox"/> using equipment designed to eliminate suction canisters <input type="checkbox"/> using reusable sharps containers <input type="checkbox"/> using waste reduction to reduce exposure <input type="checkbox"/> reducing blood sample volumes to minimize waste, reduce risk of nosocomial anemia <input type="checkbox"/> using automated technology for disposal of contents of suction canisters into sanitary sewer  If RMW is incinerated or otherwise treated on site: <input type="checkbox"/> Facility renders RMW non-infectious through autoclaving, other non-incineration technologies
<b>Universal Waste</b>	
<input type="checkbox"/> Appropriate items either managed as Universal Waste or evaluated for HazWaste management <input type="checkbox"/> Universal Waste containers structurally sound, kept closed except when adding, removing waste <input type="checkbox"/> Containers properly labeled with name of universal waste, accumulation start date <input type="checkbox"/> Storage space for universal waste maintained <input type="checkbox"/> All hospital staff who handle Universal Wastes trained in proper handling, emergency response <input type="checkbox"/> Records, documents, procedures indicate universal waste recycled within one year <input type="checkbox"/> Crushed fluorescent lamp residue evaluated for hazardous waste characteristics	<input type="checkbox"/> Compact fluorescent bulbs in use; purchasing policy, practices indicate preference for them <input type="checkbox"/> Purchasing policy, practices indicate preference for rechargeable batteries, equipment <input type="checkbox"/> Procedures for recharging batteries and equipment in place, actually being carried out
<b>Materials of Concern</b>	
<b>Asbestos:</b> <input type="checkbox"/> Asbestos assessment done to identify any asbestos-containing building materials in facility <input type="checkbox"/> Employees trained at least to "awareness level" with required OSHA training <input type="checkbox"/> Areas accessible to public having asbestos-containing building materials properly labeled. <input type="checkbox"/> Manifests complete, appropriately routed <input type="checkbox"/> Abated asbestos disposed of at EPA or state approved facility <input type="checkbox"/> Ten day notification given to local authorities prior to large asbestos projects, records retained <input type="checkbox"/> When conducting asbestos abatement, separation maintained, clearance monitoring conducted <input type="checkbox"/> Air monitoring conducted during and post abatement, records kept, clearance obtained <b>CFCs:</b> <input type="checkbox"/> Air conditioning systems >50 lb CFC maintained leak-free, records of leaks, maintenance kept	<b>CFCs:</b> <input type="checkbox"/> Ethylene oxide eliminated from facility

Evidence of Compliance	Evidence of Performance Improvement
<b>Materials of Concern Continued ...</b>	
<p><input type="checkbox"/> Technicians working on CFC air conditioning and refrigerant systems EPA-certified</p> <p><input type="checkbox"/> Refrigerant recovery devices meet EPA standards</p> <p>Glutaraldehyde:</p> <p><input type="checkbox"/> Glutaraldehyde-based high level disinfectants monitored, contained, safely handled</p> <p>Pesticides:</p> <p><input type="checkbox"/> Pesticides classified for restricted use applied only by licensed applicators</p> <p><input type="checkbox"/> Pesticide containers triple rinsed</p> <p><input type="checkbox"/> Rinsate managed as hazardous waste if not used</p> <p><input type="checkbox"/> Hazardous waste determination made, documented for pesticides being discarded</p> <p><input type="checkbox"/> Warning signs posted, staff notified when pesticides applied</p> <p>Pharmaceuticals, chemotherapeutic agents:</p> <p><input type="checkbox"/> Chemo, pharma wastes evaluated for hazwaste classification; process documented</p> <p><input type="checkbox"/> Containers holding U-listed chemo, pharma materials empty or managed as hazardous</p> <p><input type="checkbox"/> Containers holding arsenic trioxide, P-listed pharma managed as hazwaste (and as RMW?)</p> <p><input type="checkbox"/> Used syringes containing RCRA-regulated hazardous waste managed as RMW</p> <p><input type="checkbox"/> Pharmacy, oncology, nursing staff proficient in identifying, managing haz. chemo, pharma waste</p> <p><input type="checkbox"/> Staff can describe process for chemo, pharma waste evaluation, basis for choice of disposal</p> <p><input type="checkbox"/> Overt amounts of chemotherapeutic drugs managed as hazardous waste</p> <p><input type="checkbox"/> Trace amounts of chemotherapeutic drugs incinerated at permitted RMW incinerator</p> <p><input type="checkbox"/> Waiver for federal exclusion for nitroglycerin in finished dosage forms submitted, on file</p> <p>Polychlorinated Biphenyls (PCB):</p> <p><input type="checkbox"/> PCB equipment properly labeled, inspected</p> <p><input type="checkbox"/> Disposal of PCB containing items handled as appropriate</p>	<p>Glutaraldehyde:</p> <p><input type="checkbox"/> To reduce exposures, amount of glutaraldehyde used, procedures reviewed, improved</p> <p><input type="checkbox"/> Glutaraldehyde replaced with less hazardous material.</p> <p>Mercury:</p> <p><input type="checkbox"/> Sewer drainpipes suspected to contain mercury cleaned or replaced</p> <p><input type="checkbox"/> Facility has conducted mercury inventory, established mercury elimination plan</p> <p><input type="checkbox"/> Facility participates in H2E Making Medicine Mercury Free Award program</p> <p>Pesticides:</p> <p><input type="checkbox"/> Restricted pesticides not used</p> <p><input type="checkbox"/> Facility has instituted Integrated Pest Management program with following elements:</p> <p><input type="checkbox"/> Pesticide application used only as last resort</p> <p><input type="checkbox"/> Only least toxic pesticides used</p> <p><input type="checkbox"/> Primary focus of program: pest identification, monitoring</p> <p><input type="checkbox"/> Non-chemical methods used for pest control (e.g. traps, barriers)</p> <p><input type="checkbox"/> Staff training component, e.g. actions that help prevent pests on premises</p> <p><input type="checkbox"/> Pesticide applicators licensed, trained by appropriate authorities</p> <p><input type="checkbox"/> Communication to staff, patients, visitors when pesticide applied</p> <p>Petroleum Products:</p> <p><input type="checkbox"/> Energy conserved, thereby reducing use of oil, petroleum products</p> <p><input type="checkbox"/> Purchasing policy, other evidence indicates preference for energy efficient equipment</p> <p><input type="checkbox"/> Bio-diesel used in place of diesel in generators, other equipment</p> <p>Pharmaceuticals, chemotherapeutic agents:</p> <p><input type="checkbox"/> Pharmacy, oncology staff trained regarding waste reduction and p2 opportunities, practices</p> <p><input type="checkbox"/> Non-regulated chemo wastes managed in same way as regulated chemo wastes</p> <p><input type="checkbox"/> PVC- and DEHP-free IV bags, related equipment used</p> <p>Polychlorinated Biphenyls (PCB):</p> <p><input type="checkbox"/> PCB-containing equipment, oil eliminated</p>

Evidence of Compliance	Evidence of Performance Improvement
<b>Materials of Concern Continued ...</b>	
<p>Radioactive Materials, Waste:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Inventory, management plans for hazardous energy sources available</li> <li><input type="checkbox"/> Staff trained, competency tested in appropriate spill response for radioactive materials, waste</li> </ul> <p>Used Oil:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Organization properly collects used oil from vehicles, physical plant equipment</li> <li><input type="checkbox"/> Used oil stored in sturdy compatible containers labeled "used oil", kept closed</li> <li><input type="checkbox"/> Oil-containing equipment not leaking</li> <li><input type="checkbox"/> Spill control equipment available, used when necessary</li> <li><input type="checkbox"/> Spills reported to local, federal authorities</li> <li><input type="checkbox"/> Used oil recycled, receipts kept</li> <li><input type="checkbox"/> Staff trained, competency tested in appropriate spill response for used oil</li> <li><input type="checkbox"/> A hazardous waste determination made, documentation kept for used oil destined for disposal</li> <li><input type="checkbox"/> Used oil filters drained minimum twelve hours to ensure all residual oil collected</li> </ul>	<p>Radioactive Materials, Waste:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Facility eliminating or reducing radioactive material to extent possible for lab applications</li> <li><input type="checkbox"/> Facility eliminating radioactive materials with longer half-lives to the extent possible</li> </ul>
<b>Facilities and Equipment</b>	
<p>Recordkeeping and reporting:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Air permits modified when fuel usage changes</li> <li><input type="checkbox"/> Certificates to Operate, Permits not permitted to expire</li> <li><input type="checkbox"/> Calculations done, kept on site verifying air permit requirements</li> </ul> <p>Incinerator:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Incinerator operated within permit parameters, records kept</li> <li><input type="checkbox"/> Design capacity of incinerator not exceeded</li> <li><input type="checkbox"/> Hazardous waste not burned in incinerator unless allowed by permit</li> </ul> <p>Tanks:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Spill Containment and Countermeasures plan in place for aboveground storage &gt;1320 gallons</li> <li><input type="checkbox"/> Tanks permitted or registered with either EPA or local authorities</li> <li><input type="checkbox"/> Underground storage tanks upgraded or replaced by 12/22/98</li> <li><input type="checkbox"/> Maintenance, calibrating procedures enacted to ensure tank monitors working</li> <li><input type="checkbox"/> Tanks inspected on weekly/monthly basis per EPA or local regulations</li> <li><input type="checkbox"/> Tank alarm system can be heard or otherwise adequately communicated to operators</li> <li><input type="checkbox"/> Procedures written, available for steps to be taken when tank alarm sounds</li> <li><input type="checkbox"/> Tank overfill protection equipment monitored</li> <li><input type="checkbox"/> Corrosion protection for tanks adequate; cathodic protection inspected, replaced as required</li> </ul>	<p>Boilers, generators:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Bio diesel considered, possibly used with emergency generators</li> <li><input type="checkbox"/> Oil burning equipment well maintained; logs, documentation evident</li> <li><input type="checkbox"/> Energy efficient boilers, generators used to minimize air pollution</li> <li><input type="checkbox"/> Policies indicate preference for energy efficient equipment, practices throughout facility</li> </ul> <p>Incinerator:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Incineration eliminated or reduced as waste treatment or disposal method</li> <li><input type="checkbox"/> All waste minimized to reduce emissions to air</li> </ul> <p>Tanks:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Use of underground storage tanks eliminated, minimizing risk of leaks and spills</li> </ul>

Evidence of Compliance	Evidence of Performance Improvement
<b>Facilities and Equipment Continued ...</b>	
<ul style="list-style-type: none"> <li><input type="checkbox"/> Release detection equipment for tanks, piping adequate, up to date; condition monitored</li> <li><input type="checkbox"/> Suspect releases or spills reported to EPA or appropriate local authority</li> <li><input type="checkbox"/> Staff respond appropriately regarding steps to be taken in event of tank alarm, spill, or leak</li> <li><input type="checkbox"/> Tank parts labeled with appropriate American Petroleum Institute (API) code</li> <li><input type="checkbox"/> Equipment on tank to shut down when tank reaches 95% of capacity during fueling</li> <li><input type="checkbox"/> Tanks located safe distance from other areas of facility</li> </ul> <p>Wastewater:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Local rules reviewed to ensure all discharges to sewer permitted, pretreated if required</li> <li><input type="checkbox"/> All discharges to sewer reported to local wastewater authority</li> <li><input type="checkbox"/> Spill Prevention Control and Countermeasure Plans in place; adequate secondary containment</li> <li><input type="checkbox"/> All discharges to sewer evaluated to assure conformance with local, state, federal restrictions</li> <li><input type="checkbox"/> All discharges to sewer evaluated for hazwaste, reported to local sewer, hazwaste authorities</li> <li><input type="checkbox"/> Direct point source discharges required to obtain NPDES permits</li> <li><input type="checkbox"/> Septic tanks, drain fields, lagoons, other on-site wastewater disposal areas properly permitted</li> <li><input type="checkbox"/> Hazardous materials or waste storage or process areas DO NOT have floor drains</li> <li><input type="checkbox"/> Wastewater monitored, tested, reported per permit; exceedances managed appropriately</li> <li><input type="checkbox"/> Wash water from kitchen, etc. not discharged to storm sewer without NPDES Permit</li> </ul>	<p>Wastewater:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Discharges to sewer reduced or eliminated</li> </ul>

For detailed citations, tools and resources, and links to other documents, visit the Healthcare Environmental Resource Center (HERC) at <http://www.HERCenter.org>, and select JCAHO Standards under Regulations and Standards in the top navigation bar.