

Funeral Service Academy



APFSP Provider 1107

Safety within Funeral Homes

2/3/14

2 CE Hours

Course Synopsis

- *Who's Covered by OSHA?*
- *Formaldehyde and Glutaraldehyde*
- *Ventilation in Embalming Rooms*
- *Bloodborne Pathogens in Funeral Homes*
- *The Hazard Communication Standard*
- *Personal Protective Equipment*
- *Disposal of Hazardous Waste*
- *Documentation Checklist*

Introduction:

While the Occupational Safety and Health Administration (OSHA) has no standard specific to funeral homes, there are several regulations within OSHA's "Industry Standards" Code of Federal Regulations (CFR) Title 29 Part 1910, that do apply to funeral homes. In general, coverage of the Act extends to all employers and their employees in the 50 states, the District of Columbia, Puerto Rico and all other territories under federal government jurisdiction. Coverage is provided either directly by the federal Occupational Safety and Health Administration (OSHA) or through an OSHA-approved state program.

The 23 states and two territories (shown later) have OSHA-approved safety and health plans which apply to private sector employers. These plans are required to be at least as effective as federal standards. States are given six months to develop plans comparable to new federal mandates. If you are conducting business in one of these states, it is advisable to contact your local OSHA office to determine if additional compliance measures are required.

The Act has a general duty clause which states that each employer "shall furnish...a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to employees."

There are more than 22,100 funeral homes in the United States employing approximately 35,000 licensed funeral directors/embalmers and an additional 89,000 funeral service and crematory personnel. As with any workplace, funeral homes present a variety of occupational hazards. Funeral-affiliated employers must address these hazards to assure their employees have a safe work environment. The OSHA Act of 1970 states, "Each employer shall furnish to each of his employees... a place of employment which is free from recognized hazards that are causing, or are likely to cause death or serious physical harm." It also requires that employers comply with occupational safety and health standards promulgated under OSHA.

Beyond the general duty clause, OSHA is responsible for developing legal and enforceable standards deemed reasonably necessary and appropriate to protect workers on the job. Four such standards are of particular concern to funeral directors. They are:

- Occupational exposure to formaldehyde
- Hazard communication
- Protection against bloodborne pathogens
- Access to employee exposure and medical records

Although this course is designed to remind and/or educate funeral directors as to the requirements of specific OSHA regulations, it should not be relied upon to the exclusion of the actual regulations in effect in your state. Please utilize those regulations to determine if you are in compliance.

Keep in mind one of OSHA's basic requirements; every employer must display for all employees the Job Safety and Health Protection workplace poster (OSHA 2203 or state equivalent).

Funeral homes operating in federal OSHA states are not required to maintain logs of occupational illnesses and injuries on federal OSHA reporting forms 200 and 101, although some OSHA-

approved state plans may require this practice. Funeral homes are required to report within 48 hours to their local or regional OSHA office any employment accident which results in death of an employee or the hospitalization of five or more employees.

Who's Covered By OSHA?

Any employer with one or more employees is covered, and can be cited under the Occupational Safety and Health Administration (OSHA) Act of 1970. In addition, employers with 11 or more employees are required to comply with OSHA's Recording and Reporting Occupational Injuries and Illness (29 CFR 1904) requirements. Under 29 CFR 1904, employers are required to maintain occupational injury and illness records. The purpose of maintaining these records is to:

- Provide injury and illness information which is used by OSHA to measure and direct the agency's efforts
- Enable employees and employers to identify types and causes of injuries and illnesses at each establishment
- Make employers and employees more safety conscious

It is the employees' responsibility to comply with safety and health standards, rules and regulations.

States and Territories with OSHA-Approved Program Plans

The following 23 states and two territories have OSHA-approved safety and health plans which apply to private-sector employers:

Alaska - 907-465-2700

New York - 518-457-2741

Arizona - 602-542-5795

North Carolina - 919-662-4585

California - 415-972-8835

Oregon - 503-378-3272

Connecticut - 860-566-5123

Puerto Rico - 787-754-2119

Hawaii - 808-586-8844

South Carolina - 803-896-4300

Indiana - 317-232-2378

Tennessee - 615-741-2582

Iowa - 515-281-3447

Utah - 801-530-6898

Kentucky - 502-564-3070

Vermont - 802-828-2288

Maryland - 410-767-2215

Virgin Islands - 809-773-1994

Michigan - 517-373-9600

Virginia - 804-786-2377

Minnesota - 612-296-2342

Washington - 360-902-4200

Nevada - 702-687-3032

Wyoming - 307-777-7786

New Mexico - 505-827-2850

Federal OSHA Regional Offices

Alaska, Idaho, Oregon, Washington	206-553-5930
Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee	404-562-2300
Arkansas, Louisiana, New Mexico, Oklahoma, Texas	214-767-4731
American Samoa, Arizona, California, Guam, Hawaii, Nevada	415-975-4310
Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	303-844-1600
Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont	617-565-9860
District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, West Virginia	215-596-1201
Iowa, Kansas, Missouri, Nebraska	816-426-5861
Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin	312-886-6266
New Jersey, New York, Puerto Rico, Virgin Islands	212-337-2378

Funeral Homes and OSHA's General Industry Standards

A number of occupational activities performed in funeral homes fall under OSHA's General Industry Standards. These general industry standards are discussed in this document. Funeral home operators must be aware of the following regulations in order to stay compliant.

FORMALDEHYDE

Hazards of Exposure to Formaldehyde

Repeated and prolonged exposure to formaldehyde has been associated with lung and nasal passage cancers in humans. It is also highly irritating to the upper respiratory tract and eyes. Skin contact with formaldehyde, even at very low levels, can cause allergic contact dermatitis. Symptoms of this include skin redness, swelling and formation of vesicles or hives. Once an individual is sensitized, they can suffer skin reactions by being in environments where there are very low concentrations of airborne formaldehyde.

Formaldehyde and Glutaraldehyde Regulations

Formaldehyde and glutaraldehyde are two common hazardous materials used in funeral homes. Formaldehyde use is regulated under a specific OSHA standard, 29 CFR 1910.1048 and was established to protect workers from occupational exposures to formaldehyde. It defines an Action Level, a Permissible Exposure Limit (PEL) and a Short-Term Exposure Limit (STEL) for formaldehyde exposure in the workplace. The following are the established air-borne concentrations for each of these levels:

- Action level: Airborne concentration of 0.5 parts per million (ppm) formaldehyde. If this level is exceeded, the employer must perform periodic air monitoring until the levels can be reduced below this point (29 CFR 1910.1048 (b)).
- PEL: Airborne concentrations of 0.75ppm formaldehyde as an 8 hour time weighted average (29 CFR 1910.1048 (C) (1)).
- STEL: Airborne concentration of 2ppm formaldehyde over a 15 minute time interval (29 CFR 1910.1048 (C) (2)).

All employers who have any form of formaldehyde in the workplace must monitor employee exposure unless they can objectively document that the presence of airborne formaldehyde will not exceed the action level or STEL under foreseeable conditions (29 CFR 1910.1048 (d) (1)). If this cannot be done the employer must begin monitoring.

Initial monitoring is accomplished by identifying all employees who potentially have an exposure at or above the action level or STEL. Each potentially-exposed employee may be monitored, or a representative sampling plan implemented for each job classification and work shift. Monitoring must occur each time a change in equipment, process, production, personnel, or control measures is instituted (29 CFR 1910.1048 (d) (2)). If formaldehyde concentrations are revealed at or in excess of the action level, monitoring must be repeated every 6 months. If the monitoring shows levels at or above the STEL, annual monitoring is required (29 CFR 1910.1048 (d) (3)).

Monitoring can be discontinued if after two consecutive sampling periods (taken at least seven days apart) airborne concentrations are below both the action level and STEL (29 CFR 1910.1048 (d) (4)).

Glutaraldehyde, which is not covered under a specific OSHA standard, is still a hazardous material with established exposure limits. NIOSH's recommended exposure limit (REL) for glutaraldehyde is a ceiling limit of 0.2 ppm. This exposure level should not be exceeded at any time.

Another organization that establishes chemical exposure limits is the American Conference of Governmental Industrial Hygienists (ACGIH). The ACGIH has reduced their ceiling limit to a more conservative level of 0.05 ppm.

Three examples will be presented:

Example 1

Initial monitoring indicates exposure to be below the (Action Level) .5 and below the STEL .75. No further action is required. Only annual training and training of new employees is required.

Example 2

Initial monitoring reveals formaldehyde exposure with the PEL and STEL but above the Action Level as a time weighted average over eight hours. Entrance to the work area need not be posted and employees need not wear respirators. Housekeeping and engineering controls must be reevaluated and changed. Exposure monitoring must be repeated every six months until two consecutive tests are under the legal limits. Training must be repeated annually and the previous medical surveillance and record keeping must be carried out.

Example 3

Initial monitoring shows formaldehyde levels above the PEL or STEL. The employer shall develop and implement a written plan to reduce employee's exposure to or below legal levels, and give written notice to employees of the corrective action being taken to decrease exposure.

The preparation room must then be posted at all entrances as follows:

DANGER
Formaldehyde
Irritant and Potential Cancer Hazard
Authorized Personnel Only

If the exposure levels cannot be reduced immediately to the PEL's, the employer must provide employees with full face respirators, comply with fitting regulations, allow time away from work area, as needed, for employees to wash their faces and face pieces and on and on.

All employees must complete a medical questionnaire. The physician will determine whether or not the employee must undergo a physical examination. Exposure monitoring, medical surveillance, respirator fit testing and employee training must be repeated annually. Exposure monitoring records will be kept for 30 years. Medical records will be kept for duration of employment plus thirty years. Respirator fit testing records will be kept until new ones are completed.

Medical removal provision

If an employee reports significant eye, nose, throat or respiratory irritation or sensitization, or dermal irritation or sensitization, the employee will be referred to a physician to be selected by the employer. If after a two week cooling off period the physician determines the individual is sensitive to formaldehyde, the employer must transfer the individual to a job with less exposure. Economic protection of the employee is required.

Eye/Face and Wash/Shower Requirements

When it comes to emergency eye/face wash and shower requirements, OSHA has two different types of regulations— general and specific. Funeral homes fall under the general requirements that are located in OSHA's First Aid Standard under 29 CFR 1910.151(c). This standard states:

“. . .where the eyes or body of any person may be exposed to injurious corrosive materials, suitable

facilities for quick drenching or flushing of the eyes and body shall be provided within the area for immediate emergency use.”

The performance guideline for emergency drenching equipment that OSHA recognizes is the American National Standards Institute’s (ANSI) Z358.1-1998. This “Emergency Eye Shower and Wash Equipment” standard aids employers in selecting and installing emergency equipment to meet OSHA requirements.

All preparation rooms must have an eye wash and drench shower within the working space.

Compliance Requirements for Funeral Homes

The Action Item Table in this section lists the requirements for formaldehyde that all funeral homes must meet. A critical element of compliance is to keep the exposures of your employees below the limits allowed by OSHA, and to document these exposures through air monitoring. If your monitoring results indicate that employees are over OSHA’s Action Level, you should immediately make improvements to the ventilation system in your embalming room. Guidelines for improving ventilation are presented in the section of this course titled “Ventilation in Embalming Rooms.”

After improving the ventilation system, resample to assure that the corrective actions taken were effective. Until sampling results confirm that workers are no longer overexposed, a respirator which protects against formaldehyde must be worn. If you cannot reduce the formaldehyde air levels to below OSHA’s Action Level through improved ventilation, then additional requirements apply. and we recommend that you contact an independent industrial hygiene consultant to assist you in appropriately implementing these compliance requirements. A summary of the requirements found in the OSHA Formaldehyde standard is provided following the Action Items Table.

Formaldehyde Exposure Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Measure the level of exposure to formaldehyde during embalming.</p> <p>29 CFR 1910.1048(d)(2)</p>	<p>To determine formaldehyde exposure, personal air samples need to be taken from the breathing zone of the embalmer (attach badges to the collar). The time-weighted average (TWA) and the short term exposure level (STEL) need to be taken on the same day and should represent the maximum exposures experienced by your embalmer during normal operation. The TWA should be an 8 hour exposure and the STEL should be a 15 minute exposure taken during the 15 minute period that you anticipate your highest exposure.</p> <p>Formaldehyde monitoring badges can be purchased through a funeral home supply company and analyzed by an AIHA accredited laboratory. Vendors of these sampling badges include the following:</p> <p>Kelco Supply Company (800)328-7720 E-mail: info@kelcosupply.com http://www.kelcosupply.com/trans/page3.html</p> <p>The Dodge Company (617)661-0500 http://dodgeco.com</p> <p>Environmental Monitoring Technology, Inc. (800)284-2785 http://www.emt-online.com/ProductPages/KitsFOR.htm</p> <p>Pierce Chemicals Royal Bond Representative (800)527-6419 http://www.piercechemicals.com/</p> <p>SKC (800)752-8472 http://www.skcinc.com</p> <p>We recommend that you collect air samples (8-hour and 15-minute) every three months until you have sufficient monitoring results to show conclusively that employees' exposures are consistently below the Action Level (0.5 ppm).</p>
<p>A medical surveillance program should be available for employees who develop signs and symptoms of possible overexposure to formaldehyde (such as skin or respiratory problems).</p> <p>29 CFR 1910.1048(l)(1)(ii)</p>	<p>If employees experience possible signs and symptoms of overexposure to formaldehyde, employers must make medical surveillance by a physician available. All medical surveillance described here should be provided to employees at a reasonable time and place, at no cost.</p>

Formaldehyde Exposure Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Formaldehyde exposed workers must receive <u>annual</u> formaldehyde safety training.</p> <p>29 CFR 1910.1048(n)</p>	<p>The training program must include:</p> <ul style="list-style-type: none"> ➤ Discussion of the OSHA formaldehyde standard and contents of MSDS(s) you use that contain formaldehyde ➤ Purpose of formaldehyde medical surveillance ➤ Description of safe work practices to limit formaldehyde exposure ➤ Purpose and proper use of protective equipment and clothing ➤ Clean-up procedures ➤ Importance of engineering and work practice controls to prevent formaldehyde exposure ➤ Review of any emergency procedures, such as a spill
<p>We recommend that the Preparation Room entrance(s) have formaldehyde labels.</p> <p>29 CFR 1910.1048(e)(1)</p>	<p>All entrances need to be labeled saying:</p> <p>DANGER FORMALDEHYDE IRRITANT AND POTENTIAL CANCER HAZARD AUTHORIZED PERSONNEL ONLY</p>
<p>Embalming machines should have formaldehyde labels.</p> <p>29 CFR 1920.1048(h)(2)(ii)</p>	<p>Embalming machine needs a label saying:</p> <p>DANGER FORMALDEHYDE-CONTAMINATED EQUIPMENT AVOID INHALATION AND SKIN CONTACT</p>

Documentation Checklist

Formaldehyde Program Includes:

- Chemical Information List
- Training Program Verification
- Hazard Determination Program
- Hazard Communication Program
- Training Program Procedure/Content
- Personal Protective Equipment Handout(s)
- Workplace Testing Procedures/Policies/Results
- Safe Handling and Usage Policies for Formaldehyde

- Formaldehyde Waste Disposition Programs/Policies
- Medical Surveillance (Follow up/Accidents/Incidents)
- Material Safety Data Sheets
- Medical Disease Questionnaire
- Workplace Visitor Release Form*
- Training Program Presenter Qualifications
- Statement for Independent Contractors*
- Spill/Leak Detection and Response Procedures
- Incident Reporting Forms (Staff and Management)
- Incident Report Follow-up Reporting and Check-off
- Respirator Fit Testing Program Verification (when required)
- Formaldehyde Contaminated Laundry Programs
- Employee Medical Records (Employees With Occupational Exposure, After Incident Occurrence)

* These forms are not specifically required, but are highly recommended.

Summary of the OSHA Formaldehyde Standard

The OSHA formaldehyde standard (29CFR1910.1048), describes the requirements for controlling worker exposures to formaldehyde. Some of the requirements include:

- Engineering and work practice controls
- Protective equipment and clothing
- Use of warning signs and labels
- Air monitoring
- Respiratory protection
- Worker medical surveillance
- Hazard communication
- Training

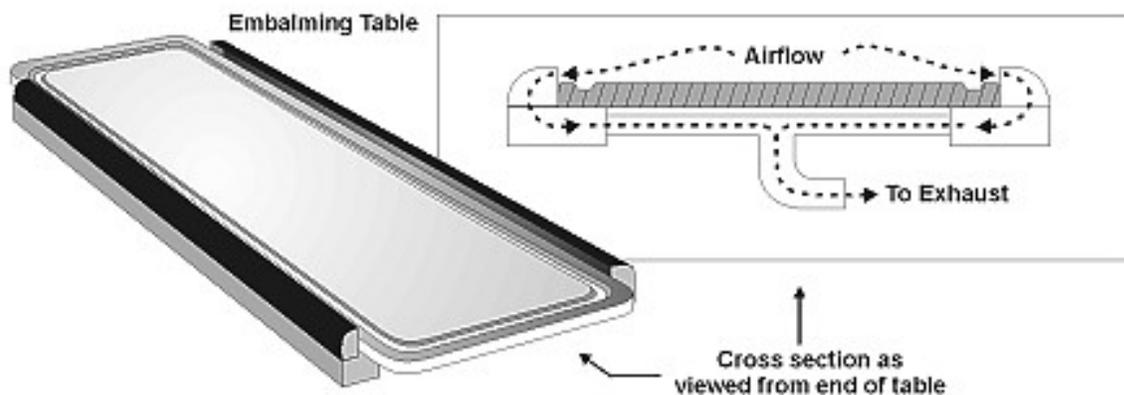
These requirements are detailed and have many components to them. They also interface with other OSHA safety and health standards. Some parts of the standard have significant application to your industry, while other components may not apply at all. If your employees are routinely overexposed to formaldehyde, and you cannot eliminate these overexposures through ventilation control or other means, then we recommend that you consult with a qualified industrial hygienist to assist you to properly implement the OSHA Formaldehyde Standard in your workplace.

VENTILATION IN EMBALMING ROOMS

The best position for supplied air is above the head of the worker, coming down, and exhausting through the floor or near the floor. The next best option is for supplied air to come from the head of the embalming table (adding a fan may increase efficiency) and the exhaust to be at the foot of the table. Ventilation requirements for funeral home preparation rooms are not specifically addressed in current existing guidelines. However, the National Mechanical Code of the Building Officials and Code Administrators (BOCA) and the Heating, Ventilation, and Air-Conditioning Handbook of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) specify ventilation criteria for autopsy rooms. These criteria for autopsy rooms can serve as useful guidelines for effectively ventilating funeral home preparation rooms.

BOCA requires a minimum of 12 air changes per hour for autopsy rooms. The BOCA Code also requires that the air shall be exhausted to the outdoors, at an approved location on the exterior of the building. ASHRAE recommends a minimum of 12 air changes per hour be supplied to autopsy rooms, and that at least two of the air changes per hour be outdoor air. ASHRAE also specifies that the room be negatively pressurized in relation to adjacent areas. The New Jersey Funeral Directors Association recommends, as an accepted industry practice, 10-15 air changes per hour for preparation rooms. A source of makeup air should also be provided in preparation rooms to prevent excessive negative pressurization and to improve air mixing within the room.

It is likely that a qualified HVAC contractor could correct these ventilation problems without a great deal of expense, and it is recommended that modifications be implemented to keep your exposures to formaldehyde as low as possible. A general notion of the ventilation system recommended is given in the diagram below, taken from a design for embalming tables from the National Institute for Occupational Safety and Health, NIOSH.



Regardless of what specifications you use for your ventilation system, it is very important that the air flow is designed so that any vapors are pulled away from the employees' breathing zone. Therefore, having adequate exhaust air capacity below the work surface is critical to reducing exposures to formaldehyde. If modifications are made to the ventilation system within the preparation room, ensure that ventilation testing is conducted to ensure that adequate air velocity and direction is maintained when the system is operating.

BLOODBORNE PATHOGENS IN FUNERAL HOMES

OSHA's Bloodborne Pathogens (BBP) Regulation (29 CFR 1910.1030)

This regulation applies to all individuals who may reasonably anticipate contact with blood or other potentially infectious bodily fluids in the course of their employment. This includes contact with skin, eyes, mucous membranes or contact from piercing the skin. The focus of the regulation is the creation of a written Exposure Control Plan, which describes how the employer will protect employees from exposure.

Introduction to the OSHA Bloodborne Pathogens Standard

Employees with occupational exposure to blood and other potentially infectious materials (OPIM) face the hazard of becoming infected with bloodborne pathogens (BBP). Because of the severe consequences of contracting diseases from these pathogens, employees who are occupationally exposed to bloodborne pathogens must be included in an exposure control plan, which is designed to eliminate or minimize employees' exposures through specific procedures, practices, controls, and training. "Universal Precautions" is an approach to infection control in which all human blood and certain human body fluids, such as semen, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids, are treated as if known to be contain bloodborne pathogens.

Compliance Requirements for Funeral Homes

Funeral homes in which embalming is conducted must comply with OSHA's Bloodborne Pathogens standard. The requirements for compliance are listed in the following table. Throughout this section, the following acronyms are used: BBP (bloodborne pathogens); OPIM (other potentially infectious material).

Bloodborne Pathogens Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Each funeral home that conducts embalming must develop an exposure control plan (bloodborne pathogen program) designed to minimize or eliminate employees' exposures to bloodborne pathogens.</p> <p>29 CFR 1910.1030(c)(1)(iii)</p>	<p>Document the exposure control plan in writing. Employees must be made aware of the written program and know where the program is kept.</p> <p>The written program must be reviewed at least annually. After reviewing the program you must document your review.</p>

Bloodborne Pathogens Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Hepatitis B vaccinations must be offered to all employees who are potentially exposed.</p> <p>29 CFR 1910.1030(f)(1)</p>	<p>All employees who are potentially exposed to blood or OPIM must be offered the hepatitis B vaccination.</p> <p>For employees who already have had the series attempt to obtain a record that the vaccinations were performed. If records cannot be obtained then have employees sign a vaccine declination form. An example of the declination form is in the GA Tech bloodborne pathogen program.</p> <p>For the new employees who start the hepatitis B vaccination series offer the Hepatitis B vaccination titer for new employees who have not already completed the series within 1 to 2 month after they complete the vaccination series. The titer is required for those new employees who have ongoing blood exposure and have exposure to sharps.</p> <p>Note: Currently the Center for Disease Control does not recommend that you do a titer for those who are already outside of the 1-2 months after there series of vaccinations because the results may or may not be accurate. Also, they are not currently recommending that a booster shot be given. However, always follow your doctor's orders.</p>

Bloodborne Pathogens Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>The company must investigate and/or document the use of engineering controls which reflect the best bloodborne pathogen exposure control technology available (including safer disposable scalpels, blunted suture needles, and safer hypodermic syringes).</p> <p>29 CFR 1910.1030(c)(1)(v)</p> <p>29 CFR 1910.1030(d)(2)(i)</p>	<p>1. Investigate engineering and work practice controls as the primary means of eliminating or minimizing employee exposure. Preventing exposures requires a comprehensive program, including engineering controls (e.g., safer scalpels) and proper work practices (e.g., no-hands procedures in handling contaminated sharps, eliminating hand-to-hand instrument passing). <u>Non-managerial employees must be involved in this process and their input must be documented.</u></p> <p>Commercially available products that are designed to eliminate infection from SHARPS injuries must be used, including safety disposable scalpels, blunted suture needles, and safety hypodermic needles. Refer to your products distributor for commercially available products.</p> <p>There are some needles that have to be re-used but should only be used when necessary and when the safety hypodermic syringes cannot be used. Do not remove disposable needles from the syringe with forceps. Dispose of the needle <i>and</i> the syringe to reduce exposure to blood borne pathogens.</p> <p>2. Implement feasible controls</p> <ol style="list-style-type: none"> 3. Document the engineering control investigation 4. You must review the safer devices at least annually to determine if newer technology is available. <div style="display: flex; justify-content: space-around; align-items: center;">  </div> <p>Examples of <i>safer syringes</i></p> <div style="display: flex; justify-content: center; align-items: center;">  </div> <p>Example of operation of a safer scalpel (self-sheathing)</p>

Bloodborne Pathogens Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Protect workers from puncture wounds caused by syringes, scalpels, suturing needles, and other “sharps.”</p> <p>29 CFR 1910.1030(d)(2)(vii)</p>	<p>Use syringes, scalpels, suturing needles, and other “sharps” which are specifically designed to prevent puncture wounds. If a needle must be recapped, placing a needle cap into a stationary cap holder, and sliding the needle into the holder using one hand would eliminate the risks of two handed recapping of needles. Do not leave the exposed needle on the instrument tray.</p> <p>Avoid handing uncapped syringes between personnel. Use a needle disposal containers equipped with devices to secure the needle while the syringe is unscrewed to eliminates handling of the needle during removal from the syringe.</p>
<p>A post-exposure evaluation and follow-up procedure must be in place in the event of an employee’s exposure to blood or OPIM, and specifically in the event of a puncture wound from a suturing needle.</p> <p>29 CFR 1910.1030(f)(3) & 29 CFR1910.1030(f)(3)(iv)</p>	<p>Following the report of an exposure incident, provide a confidential medical evaluation and follow-up to the affected employee. This should include identification and documentation of the disease status of the source individual (the corpse) if this can be obtained. The employees must be sent to a <u>medical facility</u> that is capable of providing treatment in accordance with the latest CDC guidelines for the post-exposure care of individuals who have been exposed to human blood or other potentially infectious bodily fluids.</p>
<p>Employees must use “Universal Precautions” with all corpses.</p> <p>29 CFR 1910.1030(d)(1)</p>	<p>Ensure that all employees are adequately trained to understand the concept of "universal precautions" and use them in all procedures where there is potential for contact with bloodborne pathogens---specifically, every time an embalming is done.</p>
<p>Drinking (coffee) and eating must not be allowed in work areas (including the embalming room) where there is a reasonable likelihood of exposure to blood or OPIM.</p> <p>29 CFR 1910.1030(d)(2)(ix)</p>	<p>Ensure food and drink is not allowed in the embalming room, as well as, applying cosmetics or lip balm, and handling contact lenses in areas with a likelihood of exposure.</p>

Bloodborne Pathogens Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>The facility must have a written housekeeping schedule for those areas which may be contaminated with blood or OPIM.</p> <p>29 CFR 1910.1030(d)(4)(i)</p>	<p>Determine and implement an appropriate written schedule for cleaning and decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area. All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.</p>
<p>Only products or chemicals that are listed by the EPA or FDA as registered disinfectants or sterilants may be used to decontaminate surfaces or instruments that have been contaminated with blood or OPIM.</p> <p>29 CFR 1910.1030(d)(4)(ii) 29 CFR 1910.1030(d)(4)(ii)(A)</p>	<p>Check the label to ensure that you are using on products or chemicals that are listed by the EPA or FDA as registered disinfectants or sterilants to decontaminate surfaces or instruments that have been contaminated with blood or OPIM. As is true with all disinfectant products, the effectiveness is governed by strict adherence to the instructions on the label.</p> <p>A mixture of 1 part sodium hypochlorite (household bleach) to 10 to 100 parts water is considered adequate for surfaces (made up daily).</p> <p>All instruments must be disinfected with either EPA or FDA approved cold sterilants after each use.</p> <p>NOTE: <i>Scrubbing Bubbles®, Mr. Clean®, Pinesol and other similar products are not to be used for decontamination of work surfaces because they are not registered disinfectants.</i></p> <p><i>Also, Reusable instruments must be properly disinfected after each use (i.e., in Cidex®); soap and water or Lysol® are not adequate for disinfecting contaminated instruments.</i></p>
<p>Use tongs or forceps to reach into the cleaning containers to pick up sharps.</p> <p>29 CFR 1910.1030(d)(3)(xi)(E)</p>	<p>Reusable sharps that are contaminated with blood or other potentially infectious materials should not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed. Provide and require the use of tongs or forceps for this task.</p>

Bloodborne Pathogens Action Items

Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Scrub sponges and other potentially contaminated instrument cleaning tools must be stored properly.</p> <p>29 CFR1910.1030(d)(4)(ii)(A)</p>	<p>Place the scrub brush and other cleaning tools into a closeable container. The container must be labeled with a biohazard symbol or you can use a red container to identify it as a biohazard.</p>
<p>Attach a biohazard warning label to containers of potentially infectious material.</p> <p>29 CFR 1910.1030(g)(1)(i)</p>	<p>All contaminated articles should be labeled, including the instrument tray, mop and bucket, trash cans used for biohazard storage, and bags used for storing reusable clothing, towels, sheets, refrigerators and freezers containing blood/OPIM; and other containers used to store, transport or ship blood/OPIM. The warning label must be red or orange in color with a biohazard symbol and lettering in black as illustrated below:</p> <div data-bbox="842 911 1130 1115" data-label="Image"> </div>
<p>Trash cans used for containment of biohazards must be lined with biohazard bags. The regulated waste must be placed in a container that can be closed or covered with a lid.</p> <p>29 CFR1910.1030(d)(4)(iii)(B)(1)(iii)</p>	<p>If the trash is bio-contaminated then you must put a red biohazard bag in the trashcan and a biohazard sticker on the outside</p> <p>It is recommended that you use trashcans with foot pedal operation for the lid to prevent contaminating the lid with blood or OPIM.</p>
<p>Sharps containers must be easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used.</p> <p>1910.1030(d)(4)(iii)(A)(2)(i)</p>	<p>The sharps container can not be stored in a manner that limits its accessibility. This is to ensure that an employee will not be stuck while trying to place a sharp in the sharps container. Sharps containers should not be placed on the floor, or on countertops where upper cabinets obstruct access.</p>

Bloodborne Pathogens Action Items	
Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Employees with occupational exposure to bloodborne pathogens must be trained on the safety procedures related to blood or OPIM.</p> <p>29 CFR 1910.1030(d)(3)(viii)</p>	<p>Provide training identified in the sample bloodborne pathogen sample program(in the appendix) for each exposed employee. Training must be provided before initial exposure, and at least yearly thereafter. This training must provide site specific training as it relates to the exposure control plan and post-exposure evaluation and follow-up.</p> <p>1. Employee training records must include the following:</p> <ol style="list-style-type: none"> the dates of the training sessions; the contents or a summary of the training sessions; the names and qualifications of the persons conducting the training; and the names and job titles of all persons attending the training sessions. <p>2. Training records must be maintained for at least 3 years from the date of the training. Make sure that your training program covers all the elements required by OSHA as specified in the bloodborne pathogens standard.</p>
<p>Although not required by OSHA for <u>funeral homes</u>, a log to document sharps related injuries is recommended.</p>	<p>The sharps injury log must include:</p> <ol style="list-style-type: none"> The type and brand of device involved in the incident The department or work area where the exposure incident occurred An explanation of how the incident occurred

Documentation Checklist

Occupational Exposure to Bloodborne Pathogens Program Includes:

- Exposure Control Plan
- Exposure Determination Plan
- Workplace Visitor Release Form*
- Universal Precautions Enforcement Procedures/Policies
- Training Program Content/Procedure
- Personal Protective Equipment Handout(s)
- Incident Reporting Forms (Staff and Management)
- Housekeeping Procedures (Verification Forms)
- Embalming Procedures—Infectious, Contagious, and/or Communicable Disease Procedures*

- HBV Declination Forms
- Training Program Verification
- Embalming Procedures—General*
- Training Program Presenter Qualifications
- Statement for Independent Contractors*
- HBV Verification of Administration Forms
- Instrument and Machine(s) Disinfection Procedures
- Laundry Procedures/Policies
- Employee Medical Records - Employees With Occupational Exposure (After Incident Occurrence)
- Potentially Hazardous Biomedical Waste Disposition Program (If Required by Federal/State/Local Agency)

* These forms are not specifically required, but are highly recommended.

(CHEMICAL) HAZARD COMMUNICATION PROGRAM

The Right-To-Know Law

Officially known as The Hazard Communication Standard 29 CFR 1910.1200 and enacted November 25, 1983, by OSHA. Its purpose is to ensure that chemical hazards in the workplace are identified and evaluated, and that the information concerning these hazards is communicated to both employers and employees. This transfer of information is to be accomplished by means of a comprehensive hazard communication program that includes container labeling and other forms of warning including Material Safety Data Sheets (MSDSs) and employee training.

Hazard Communication Plan

The purpose is to provide to the employee a written plan concerning hazards associated with chemicals in the workplace. This written plan must be available to the workers in their worksite. This plan would include:

Chemical Information List

A list of all chemicals

Material Safety Date Sheets (MSDS)

Identifies the hazardous chemical and common name, physical and chemical characteristics of the hazardous chemical. A list of the hazardous chemicals known to be present that is referenced with a MSDS sheet and also labels on the containers themselves. The law allows electronic access to the maintenance of paper copies of MSDS.

Most likely they are stored in a loose leaf binder easily located in the workplace.

1. Information contained on a MSDS:
 - a. The identity used on the label
 - b. The chemical and Common names of all hazardous ingredients
 - c. Physical and chemical characteristics
 - d. Physical hazards including the potential for fire, explosion and reactivity
 - e. Health hazards including signs and symptoms of exposure
 - f. Primary routes of entry
 - g. The OSHA permissible exposure level
 - h. Control measures for the chemical
 - i. Emergency and first aid procedures
 - j. The name, address and telephone number of the chemical manufacturer
2. MSDS must be supplied by manufacturer to employer at the time of shipment of chemical
3. If MSDS is not supplied with chemical, the employer must request one from the manufacturer as soon as possible
4. MSDS must be available to employees in the workplace

Labeling

All containers must be labeled with:

1. Identification of the hazardous chemicals
2. Appropriate warnings
3. Manufacturer name
4. Not required to label containers for immediate use (embalming machines)

Training

Hazards training can be accomplished by either: informing the employee of the hazard(s) of each chemical, or by informing the employee of the hazard(s) of all the chemicals in a room. In the case of the embalming room of the funeral home, some of the hazards include carcinogenicity (cancer causing potential), toxicity (potential to be poisonous) and mutagenicity (potential to cause mutations). Mutagenicity is especially true for female embalmers who may be pregnant. If an embalmer / Funeral Director is pregnant, she should contact her health care provider to determine any hazards she should be cautious of. When the employee contacts her health care provider, she should take with her the chemicals that are used; this can be a listing of the chemicals from the OSHA manual.

Compliance Requirements for Funeral Homes

Funeral homes use hazardous chemicals for embalming, disinfecting surfaces and equipment, and for other purposes. The compliance requirements for OSHA’s Hazard Communication standard are given in the following table. Please be aware that this OSHA standard refers specifically to CHEMICAL hazards, and is not intended to cover ALL hazards in the workplace. Of the chemicals used in the funeral home business, you should pay particular attention to embalming fluids, and to the chemicals used for disinfecting equipment and surfaces. Products with formaldehyde require special training, which is specified later.

Hazard Communication Action Items	
Hazardous Condition or Requirement	Recommended Corrective Actions
<p>Document the hazard communication program for your facility in writing.</p> <p>29 CFR 1910.1200(e)(1)</p>	<p>Document a hazard communication program specific to your facility. Address how labeling, MSDSs, and training requirements will be met and include a list of hazardous chemicals used at the facility.</p> <p>To assist you in establishing your program, a model hazard communication program is found on the CD mailed with this report. A paper copy is also available at your request.</p>
<p>In your written hazard communication program, list all of the hazardous chemicals used at your facility.</p> <p>29 CFR 1910.1200(e)(1)(i)</p>	<p>Develop a list of all hazardous chemicals in the facility and keep it with the written program. Update the list whenever new hazardous chemicals are brought into the facility.</p>
<p>Ensure that all containers of hazardous chemicals are properly labeled</p> <p>29 CFR 1910.1200(f)(5)(i) and (ii)</p>	<p>Ensure that all containers of hazardous materials entering the facility are appropriately labeled with the name of the material, a hazard warning, and name and address of the manufacturer or other responsible party. If hazardous materials are transferred to a container other than the original, ensure that the secondary container has a label with identity and hazard warnings.</p>
<p>Obtain an MSDS for each hazardous chemical used at the facility.</p> <p>29 CFR 1910.1200(g)(8)</p>	<p>Obtain and maintain a file of MSDSs for all hazardous chemicals used at the facility. They can be obtained from the manufacturer, distributor, or supplier.</p>
Hazard Communication Action Items	
Hazardous Condition or Requirement	Recommended Corrective Actions

Train all employees about the hazards of the chemicals with which they worked.	Train employees about the hazardous chemicals present in their work area. Train them at the time of initial assignment to a job using hazardous chemicals and whenever a new hazardous chemical is introduced.
29 CFR 1910.1200(h)(1)	NOTE: Formaldehyde hazard training must be repeated annually.

Documentation Checklist

Hazard Communication Program Includes:

- Chemical Information List
- Training Program Verification
- Emergency Response Forms/Letters
- Hazard Communication Program
- Training Program Presenter Qualifications
- Training Program Procedure/Content
- Personal Protective Equipment Handout(s)
- Incident Reporting Forms (Staff and Management)
- Hazardous Chemical Waste Disposition Program/Policies
- Material Safety Data Sheets
- Hazard Determination Program
- Superfund Amendments and Reauthorization Act(SARA)

* These forms are not specifically required, but are highly recommended.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Introduction to the OSHA Personal Protective Equipment Standard

All employers are required to make an assessment of the hazards in their workplaces. For any hazards identified, the employer must certify that the PPE which has been selected is that which is most appropriate to the hazard. Additionally, employers must certify that employees have been properly trained to use the PPE.

Compliance Requirements for Funeral Homes

Consult the material safety data sheets (MSDS) to determine proper PPE when handling any given chemical. It is recommended that embalmers using solutions containing formaldehyde wear the following PPE: coveralls, shoe covers, gloves, chemical goggles, face shield, head cover and surgical

mask. Coveralls, aprons, or gowns need to have full sleeve coverage and be impervious to blood, formaldehyde, and other chemical agents. If air sampling indicates that exposures to formaldehyde during embalming exceed the limits permitted by OSHA, then a respirator which protects against formaldehyde must be worn.

Personal Protective Equipment (PPE) Standards

PPE Standards went into effect August 27, 1971 for general industry. In 1994 the PPE standards were revised and now encompass General Requirements (29 CFR 1910.132), Eye and Face Protection (29 CFR 1910.133), Head Protection (29 CFR 1910.135), Foot Protection (29 CFR 1910.136), and Hand Protection (29 CFR 1910.138).

A key component of the PPE Standard is the hazard assessment of the work area as required under the General Requirements. According to OSHA, under 1910.132(d) Hazard Assessment and Equipment Selection, “. . . the employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment.” If the assessment determines that hazards are present, or likely to be present, the employer shall:

- Select and have each affected employee use PPE that will protect from the identified hazards;
- Inform each affected employee of the selection decision;
- Select PPE that properly fits each affected employee;
- Document that the hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment

In addition, the employer is also required to train the affected employees on the proper use of the selected PPE. This is covered in the Hazardous Communication written plan.

Respiratory Protection Program

This program ensures that all employees are properly protected from respiratory hazards. According to 29 CFR 1910.134, creating and maintaining an individualized written respiratory protection program is the responsibility of all employers who provide respirators to their employees. The program must be administered by a suitably trained program administrator.

When establishing a Respiratory Protection Program, the funeral home operator must first identify what airborne contaminants are present. The MSDS required under the Hazard Communication Standard contains this important information. Once the contaminants are identified, the operator will need to conduct air monitoring to determine whether employee exposures exceed OSHA's permissible exposure limit (PEL) for the identified contaminant(s). The established PEL(s) are also printed on the MSDS.

If after conducting the air monitoring the employer determines contaminants concentrations are above the PEL, the employer must implement engineering controls (ventilation systems) or administrative controls (job rotations) to reduce the employee exposure. If neither of these options are feasible, the employer must then provide appropriate respiratory protection to the employee. Assigned respiratory protection must be approved by National Institute of Occupational Safety and Health (NIOSH) for the contaminant(s) present.

If a funeral home preparation room violates the formaldehyde rule, respirators must be provided to specific embalmers.

Personal Protective Equipment Action Items	
Hazardous Condition or Work Practice	Recommended Corrective Actions
<p>Assess the tasks conducted at the funeral home to determine what PPE is needed.</p> <p>29 CFR 1910.132 (d)(1)</p>	<p>Conduct a PPE hazard assessment of your workplace. You must also document, in writing, that the assessment has been completed.</p> <p>To assist you in establishing your program, a model PPE assessment is found on the CD. A paper copy is also available at your request.</p>
<p>Where the use of PPE is required, train the employees who must wear the PPE.</p> <p>29 CFR 1910.132 (f)(1)</p>	<p>Provide employees with site-specific training on:</p> <ul style="list-style-type: none"> (i) When PPE is necessary; (ii) What PPE is necessary; (iii) How to properly put on and take off, adjust, and wear PPE; (iv) The limitations of the PPE; and, (v) The proper care, maintenance, useful life and disposal of the PPE. <p>Document that employees have received and understood training on PPE.</p>

Personal Protective Equipment Action Items	
Hazardous Condition or Work Practice	Recommended Corrective Actions
<p>Wear gloves that are designed for protection against the hazards found in the embalming room.</p> <p>29 CFR 1910.138(a)</p>	<p>Nitrile or butly gloves are recommended for exposure to formaldehyde-containing solutions. Other materials (natural latex rubber, PVC, or polyethlyene) may be suitable for short immersion periods, but these gloves may have to be changed more frequently than gloves made of nitrile or butyl, due to material degradation. Consult with glove manufacturers, or the MSDS for the chemical, to ensure that the gloves you select provide proper protection against formaldehyde and blood exposures. Barrier creams are not regarded as effective protection for formaldehyde, since there is no data demonstrating their efficiency.</p> <p>For tasks that have a high risk of cut or puncture injuries, gloves with an interposed layer of cut-proof synthetic mesh should be considered.</p>

Wear eye protection that is appropriate to the hazards in the embalming room. 29 CFR 1910.133 (a)(1) & 29 CFR 1910.1048(h)(1)(iii)	Provide eye protection that is appropriate to the tasks being conducted, and to the chemicals in use. The formaldehyde standard specifically requires the use of both a face-shield and goggles for tasks where an employee may be exposed to formaldehyde vapors or splashes. For other chemicals, consult the MSDS for guidance.
Provide an emergency eyewash and shower in the embalming room. 29 CFR 1910.151(c)	Install an emergency eyewash or combination eyewash/shower. The location should be no more than 10 seconds travel time from anticipated exposure points. One hundred feet can be traveled in 10 seconds if the workplace has no obstacles. If doors or other obstructions are present, the distance is much less.

Guidelines for Emergency Showers and Eyewashes

- 1) Initiation: One hand, one action. Once initiated, flow continues, leaving both hands free.
- 2) Location: 15 seconds, 25 feet travel, maximum (for highly concentrated solutions, 10 seconds, 10 feet maximum). Eyewashes positioned 34" - 39" high, showers approximately 82" high, with 67" high activation (maximum), positioned 23" (maximum) off center from shower head. Location must be clearly marked, well lighted, and easily accessible, i.e., no obstacles, doorways, or turns.
- 3) Water quality: Potable, temperature (60-100 degrees F, ideally 90-95 degrees F). Pressure (eyewash 30 psi at supply line, shower 30 psi), amount (eyewash 3 gallons/minute for 15 minutes minimum, shower 30 gallons/minute for 15 minutes minimum), maintenance (float-away covers or means to prevent contamination; flush units weekly for a minimum of 3 minutes; bump test eyewashes daily, showers weekly; full flow testing monthly).
- 4) Training: Routine drills advisable. As a minimum, employees must know the location and proper use of eyewashes and showers (i.e., initiate, remove contaminated clothing, flush full 15 minutes, etc.).

Medical and First Aid Regulations

In 1998, OSHA revised its Medical Services and First Aid regulation, 29 CFR 1910.151. The revision states, "In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. Adequate first aid supplies shall be readily available." Included in the revision was Appendix A, a non-mandatory guideline that contains examples of minimal contents for first aid kits.

This appendix is taken from the ANSI Z308.1-1978, "Minimum Requirements for Industrial Unit-Type First Aid Kits"; it identifies the fill content that should be adequate for small worksites. The employer is responsible for determining the need for additional first-aid kits, quantities and the types of supplies at the worksite for large/larger worksites.

Chemical Compatibility Concerns in Storage

Chemicals play an important role in many workplace applications. The inherent hazards of chemicals can be reduced by minimizing the quantity of chemicals on hand. However, when chemicals must be

in-house, proper storage and handling can reduce or eliminate the associated risks.

Proper storage information can usually be found on the chemical's MSDS. The MSDS will answer questions such as:

- Is the chemical a flammable or combustible?
- Is the chemical a corrosive?
- Does the chemical need to be stored at other than ambient temperature?
- Is the chemical an oxidizer or reducer?
- Is the chemical light sensitive?
- Does the chemical require any special handling procedures?

Proper segregation of chemicals is necessary to prevent incompatible materials from inadvertently coming into contact with each other. If incompatible materials come into contact, a fire, explosion, violent reaction or the creation of toxic gases can result.

When segregating chemicals, acids should not be stored with bases and oxidizers should not be stored with reducing agents or organic materials. A physical barrier and/or distance is effective for proper segregation.

If cabinets are used to segregate chemicals, consider the compatibility of the chemicals with the cabinet itself. For example, corrosives like strong acids and caustics will corrode most metal cabinets. Non-metallic or epoxy painted cabinets are available and will provide a better service life with these corrosive materials.

Safety cabinets are specifically made to maintain flammable and combustible materials. It's important to be aware of maximum allowable container size and maximum quantities for storage in cabinets based on the class of the flammable. The class of a flammable or combustible is determined by its flash point and boiling point.

Disposal of Hazardous Waste

The disposal of hazardous waste varies from State to State and even between municipalities within the State. To validate that you are in compliance within your local requirements, you may want to contact your waste-water treatment plant.

Documentation Checklist

Verification Forms/Letters

- Workplace Visitor Release Form*
- Emergency Responder Forms/Letters
- Statement for independent Contractors*
- Spill/Leak Detection and Response Procedures

- Incident Report Follow-up Reporting and Check-off
- Safe Handling and Usage for Workplace Chemicals
- Employee Medical Records (Forms for Employees With Occupational Exposure, After Incident Occurrence)

General Documents Program Includes:

- General Safety Rules*
- OSHA 200 Forms*
- First Call Forms*
- OSHA 101 Forms and/or Alternatives
- Monthly Fire Extinguisher Reporting Form
- General Emergency Procedures
- Maintenance Procedures
- Computer Station/Electrical Preparedness*
- Motor Vehicle Accident Investigation/Reporting Forms
- Embalming Reports*
- Embalming Authorizations
- HIV/HBV Identification/Prevention Program
- TB Identification/Prevention Program
- Emergency Evacuation Procedures
- Emergency Response Questionnaires (Individual)
- Computer Policies*
- Motor Vehicle Driver/Safety Program
- Automotive Maintenance Documentation

* These forms are not specifically required, but are highly recommended.

Note: Some local jurisdictions may have additional requirements for documentation and/or licensing.